

# 145th Street Station Subarea Planned Action

DRAFT ENVIRONMENTAL IMPACT STATEMENT



JANUARY 2015

# **145<sup>th</sup> Street Station Subarea Plan**

# Planned Action Draft Environmental Impact Statement

**Prepared for:** 



Prepared by:



January 2015

This document should be cited as:

Otak, Inc., 2015. 145<sup>th</sup> Street Station Subarea Planned Action Draft Environmental Impact Statement, January, Shoreline, WA. Prepared for the City of Shoreline, Washington.



#### Planning & Community Development

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January 17, 2015

Subject: 145<sup>th</sup> Street Station Subarea Plan- Planned Action, Draft Environmental Impact Statement

#### Dear Interested Residents, Partners, and Stakeholders,

The City of Shoreline invites you to comment on the 145<sup>th</sup> Street Station Subarea Plan Planned Action Draft Environmental Impact Statement (DEIS). The DEIS analyzes environmental impacts and recommends mitigation related to redevelopment alternatives in the subarea surrounding the future light rail station located at NE 145<sup>th</sup> Street and Interstate 5. The DEIS focuses on land use patterns/plans and policies; population, housing, and employment; multi-modal transportation (roads, sidewalks, bike lanes, and transit); public services (schools, parks, recreation and open space, police, fire and emergency services, and solid waste disposal); and utilities (water, wastewater, surface water, electricity, and communications).

The City and its residents have been working on the 145<sup>th</sup> Street Station Subarea Plan since spring 2013 to create a land use, transportation, and infrastructure framework for a livable, equitable, and sustainable transit-oriented community in Shoreline. In addition to supporting the regional investment in high-capacity transit, the subarea plan implements Shoreline's 2012 Comprehensive Plan goals and policies and the City's Vision 2029. The subarea plan should expand community choices related to land use and transportation through regulations to promote a variety of housing styles and increased levels of affordability; enhanced pedestrian, bicycle, transit, and motor vehicle connectivity, mobility, and safety; neighborhood-serving employment opportunities and businesses; and other desired amenities.

State law requires that the likely environmental impacts of land use actions be identified via environmental impact statements, and this DEIS provides analysis consistent with requirements for Planned Actions (see below). Three alternatives are analyzed in the DEIS, and all assume the development of a high-capacity transit network including the light rail station and park-and-ride structure at the 145<sup>th</sup>/Interstate 5 location. The alternatives are:

- Alternative 1 This is the No Action Alternative. The no action alternative will assume that zoning within the Subarea does not change and will
  evaluate how the Subarea would grow under the current zoning and land use designations. No action does not mean "no change" as property
  owners would still have the ability to maximize existing development capacity, including building to current 35 foot height limits, adding
  accessory dwelling units, etc.
- Alternative 2 Connecting Corridors. This scenario showcases both 5th Avenue and 155th Street as connecting corridors between station subareas; commercial districts at 165th Street, 15th Avenue, and Aurora Avenue N; and the Community Renewal Area at Aurora Square. Since potential development in this scenario is more spread out, lower density zoning is analyzed in several locations compared to the Compact

Community scenario, and the most intensive zoning designation would allow 6 story buildings (although additional height could be negotiated through provision of certain amenities).

Alternative 3 – Compact Community. This scenario does not emphasize corridors and focuses potential growth solely on the area within roughly
a ½ mile radius of the future light rail station. Because potential development in this scenario is concentrated, higher density zoning is analyzed
in several locations compared to the Connecting Corridors scenario. Building heights of 85 feet (7 stories) are imagined near the station and
along the freeway on both the west and east sides (although additional height could be negotiated through provision of certain amenities).

Regarding the Planned Action adoption process, upon completion of this DEIS the City Council will select a Preferred Alternative based on the results of the environmental analysis, public and agency comments, and potential additional analysis that may be needed as part of finalizing the EIS. The Preferred Alternative may include combined features of the alternatives analyzed in this DEIS, or new features, as long as these are analyzed to the extent required by the State Environmental Policy Act (SEPA) for Planned Actions.

The Preferred Alternative will be identified as the Planned Action in the Final Environmental Impact Statement (FEIS). Additional analysis may be required to identify impacts specific to the Preferred Alternative. With completion of the FEIS, the City would finalize and adopt the 145<sup>th</sup> Street Station Subarea Plan, including zoning and supporting regulations as the Planned Action. Future development applications that are consistent with the 145<sup>th</sup> Street Station Street Station Subarea Plan/Planned Action would not be subject to further environmental review under SEPA.

Public and agency comment is invited regarding the DEIS. The City will accept written comments from issuance on January 17, 2015 until February 17, 2015 (see FACT SHEET). Please provide written comments to:

Steven Szafran, AICP City of Shoreline 17500 Midvale Avenue N. Shoreline, WA 98133

Emailed comments are welcome and should be sent to sszafran@shorelinewa.gov.

In addition, the City will accept public comments on the DEIS at a Planning Commission Public Hearing scheduled for February 5, 7:00 to 9:00 p.m. in the Council Chambers, located at 17500 Midvale Avenue N, Shoreline, WA 98133 (Note: You are also invited to an Open House just prior to the Public Hearing from 6:00-7:00 p.m. to learn more about the 145<sup>th</sup> Street Station Subarea DEIS). The City of Shoreline appreciates your interest in the 145<sup>th</sup> Street Station Subarea Plan and Planned Action Ordinance and looks forward to hearing from you.

Sincerely,

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Rachael Markle, AICP Director, Planning & Community Development

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# FACT SHEET

# **Project Title**

145th Street Station Subarea Plan/145<sup>th</sup> Street Station Subarea Planned Action

# **Proposed Action and Alternatives**

Three alternatives are qualitatively compared and analyzed in this draft environmental impact statement (DEIS):

- Alternative 1—No Action, which would retain existing planning and zoning provisions in the station subarea
- Alternative 2—Connecting Corridors, which would adopt a new framework for land use and supporting improvements in the station subarea, with changes in zoning focused around the planned light rail station and along the 5<sup>th</sup> Avenue NE and 155<sup>th</sup> Street corridors. The proposed zoning under this alternative affects a broader geographic extent, but would result in less density at build-out than Alternative 3—Compact Community.
- Alternative 3—Compact Community, which would adopt a new framework for land use and supporting improvements in the station subarea, with changes in a more compact area surrounding the planned light rail station. While this alternative proposes change over less geographic extent than Alternative 2, it would result in more density at build-out.

The City and its citizens have been working on the 145<sup>th</sup> Street Station Subarea Plan since spring 2013 with the intent of creating a land use, transportation, and infrastructure framework to support implementation of a livable, workable, equitable, and sustainable transit-oriented community in Shoreline. The two action alternatives, Alternative 2—Connecting Corridors and Alternative 3—Compact Community, have been developed to advance this vision. In addition to supporting the regional investment in high-capacity transit, the subarea plan would support Shoreline Comprehensive Plan goals and policies and implement the City's Vision 2029.

The No Action Alternative would retain the current provisions of the Comprehensive Plan and other existing plans, as well as development regulations applicable to the subarea. This DEIS assumes that the light rail station would be implemented with or without zoning changes in the subarea. Although individual properties could be developed to the maximum allowable density under current zoning in the No Action Alternative, this is not consistent with the vision for vibrant, transit-oriented communities throughout the region and in Shoreline.

Upon completion of this DEIS, the City of Shoreline will select a preferred alternative based on the results of the environmental analysis, public and agency comments, and potential additional analysis that may be needed as part of finalizing the EIS. The preferred alternative may include combined features of the alternatives analyzed in this DEIS, or new features, as long as these are analyzed to the extent required by the State Environmental Policy Act (SEPA) for planned actions.

With the completion of the future Final Environmental Impact Statement (FEIS), the City of Shoreline would finalize and adopt the 145<sup>th</sup> Street Station Subarea Plan and a supporting Planned Action Ordinance. The City also would amend its current Comprehensive Plan and other applicable plans as well as the Shoreline Development Code, as may be required to support the plan and ordinance.



With adoption of the Planned Action Ordinance for the preferred alternative, future development applications that are consistent with the planned action would not be subject to further environmental review under SEPA, because of the extent of environmental analysis already provided in this EIS. The planned action process is intended to emphasize quality environmental review of early planning efforts and provide the opportunity for early public input to shape decisions. Development applications, would still be subject to requirements of the City's development regulations.

Under the No Action Alternative, SEPA review and compliance would be required on a per-project basis in the future depending on the extent of redevelopment proposed. While the No Action Alternative would occur under the current adopted Comprehensive Plan and Development Code, it would not be consistent in meeting the City's stated objectives in the Comprehensive Plan for implementing transit-oriented communities around the proposed light rail stations. Mitigations identified through the EIS process such as pedestrian and bicycle facilities and additional park space would likely not be implemented.

### Location

Through a separate public process for the Lynnwood Link Extension , which also included development of a DEIS, Sound Transit identified NE 145<sup>th</sup> Street on the east side of Interstate 5 (I-5), north of the 145<sup>th</sup> interchange, as the preferred location for one of the two light rail stations to potentially be built in Shoreline. A park-and-ride structure, also constructed by Sound Transit, would be potentially located north of the station, also on the east side of I-5. The City of Shoreline supports the station location included in Sound Transit's preferred alternative for the Lynnwood Link Extension, and identifies the location in the City's Comprehensive Plan Land Use Map.

For the purposes of developing the 145<sup>th</sup> Street Station Subarea Plan and completing environmental analysis for this DEIS, the City of Shoreline Planning Commission determined study area boundaries through consideration of factors such as topography, ability to walk and bike to and from the station, policy direction, existing conditions, and other influences. The Planning Commission recommended using two sets of boundary lines applicable to these conditions, and for this DEIS, the subarea is defined by two boundaries, one that delineates the study area for land use and another that delineates the study area for mobility (multi-modal transportation). These boundaries were then reviewed and adopted by City Council.

Refer to Figure 1-3 Chapter 1 for depictions of these study area boundaries surrounding the 145<sup>th</sup> light rail station location. The rectangular-shaped subarea includes portions of the Ridgecrest, Parkwood, and Briarcrest neighborhoods of Shoreline, with 145<sup>th</sup> Street as the southern border of the subarea. This is also the border between the city limits of the City of Shoreline and the City of Seattle. The subarea extends approximately one-half mile to the north. For more information about the study area boundaries, refer to Chapter 1.

#### **Proponent** City of Shoreline



# Lead Agency

City of Shoreline

# **Responsible Official**

Rachael Markle, AICP, Director Department of Planning & Community Development City of Shoreline 17500 Midvale Avenue N Shoreline, WA 98133

# **Contact Persons**

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Steve Szafran, AICP, Senior Planner Department of Planning & Community Development City of Shoreline 17500 Midvale Avenue N, Shoreline, WA 98133 <u>sszafran@shorelinewa.gov</u> 206.801.2512

# **Planned Action Environmental Impact**

# **Statement Process**

The Washington state legislature adopted the planned action process for SEPA to emphasize quality environmental review of early planning efforts and early public input to shape decisions. Basic steps in designating and implementing planned actions are to:

- Prepare an environmental impact statement (EIS);
- Designate the planned action improvement area by ordinance, where future projects would develop consistent with the EIS analysis; and
- Review permit applications for future projects for consistency with the designated planned action (based on an environmental checklist prepared by project proponents to compare proposed improvements to the planned action analysis).

The intent is to provide more detailed environmental analysis during formulation of planning proposals, rather than at the project permit review stage. A planned action designation by a jurisdiction reflects a decision that adequate environmental review has been completed and further environmental review under SEPA, for each specific development proposal or phase, would not be necessary if it is determined that each proposal or phase is consistent with the development levels specified in the adopted Planned Action Ordinance and supporting environmental analysis.

Although future proposals that qualify as fitting within the threshold of the planned action would not be subject to additional SEPA review, they would be subject to application notification and permit process requirements. For projects located within the proposed MUR-85' or MUR-65'zones, with proponents choosing to proceed through a development



agreement, additional public review also would be part of that process.

The Planned Action Ordinance would be expected to help catalyze redevelopment and revitalization in the light rail station subarea. Property owners and potential developers would be encouraged to redevelop by the more predictable development process that takes place under the planned action process. This DEIS helps the City identify impacts of development and specific mitigation measures that developers would have to meet to qualify for a planned action project.

# **Required Approvals**

In order to implement the selected alternative as an outcome of this DEIS, the following must be approved by the City Council:

- Adoption of a final 145th Street Station Subarea Plan and provisions and regulations that would require amendments to the City's Comprehensive Plan and the Shoreline Development Code (Title 20); and
- Adoption of a Planned Action Ordinance.

After these City actions, permits to be acquired by individual development proposals would likely include, but not be limited to: land use permits, site development permits, building permits, and right-of-way permits. If the proposed development is consistent with the subarea plan and analysis in this DEIS, additional environmental analysis would not be required.

# **Environmental Impact Statement Authors and Principal Contributors**

This document has been prepared under the direction of the City of Shoreline, Planning & Community Development Department. Principal and contributing consultants are listed below.

#### **Principal Authors:**

**Otak, Inc.** 10230 NE Points Drive, Suite 400 Kirkland, WA 98033 (425) 822.4446

#### **Contributing Authors:**

BAE Urban Economics 1285 66th St, Emeryville, CA 94608 (510) 547-9380 (Market Assessment and Transit-Oriented Development)

Fehr & Peers 1001 4<sup>th</sup> Avenue, Suite 4120 Seattle, WA 98154 (425) 820-0100 (Transportation)

# Date of Draft Environmental Impact Statement Issuance

January 17, 2015



# **Public Comments/Due Date**

The City of Shoreline will accept written comments on or before **February 17, 2015** 

If mailing comments via the US Postal Service, comments must be postmarked by Midnight, February 17, 2015. If providing written comments via hand or commercial delivery, comments must be submitted by 5:00 pm, February 17, 2015. Address comments to the responsible official as follows:

#### Steve Szafran

Department of Planning & Community Development City of Shoreline 17500 Midvale Avenue N Shoreline, WA 98133

Comments also may be submitted via email to: <u>sszafran@shorelinewa.gov</u>

In addition, the City will accept public comments at a public hearing, as follows:

Open House/Public Hearing/Planning Commission meeting on the Draft Environmental Impact Statement for the 145<sup>th</sup> Street Station Subarea Plan, scheduled for February 5, 2015, 6:00 pm to 9:00 pm in the Shoreline City Council Chambers, located at 17500 Midvale Avenue N, Shoreline, WA 98133 (with a 6:00 to 7:00 p.m. open house and 7:00 to 9:00 p.m. hearing at the Planning Commission meeting).

# Type and Timing of Subsequent Environmental Review

After the close of the public comment period, the City will prepare a FEIS that provides responses to comments received.

The FEIS will identify the proposed alternative for adoption, which may be one of the alternatives analyzed in the DEIS, or a new alternative containing components of the DEIS alternatives. If additional environmental analysis is required for the proposed alternative, it will be presented in the FEIS. The City will then finalize the subarea plan based on analysis of the alternatives and comments received from the public.

# Date of Final Action and Implementation

The City anticipates taking final action on the adoption of the 145<sup>th</sup> Street Station Subarea Plan, FEIS, and Planned Action Ordinance, along with supporting Comprehensive Plan and Development Code amendments, in June 2015. If approved, it is envisioned that redevelopment of the station subarea would occur gradually, over the coming decades.

# Previous Relevant Environmental and Planning Documents

Prior relevant environmental review was conducted in the following EISs, including the City's Comprehensive Plan and subsequent amendments:

- Lynnwood Link Extension Draft Environmental Impact Statement by Sound Transit, July 2013
- *City of Shoreline Comprehensive Plan,* update adopted by Ordinance 649 on December 10, 2012
- *City of Shoreline Transportation Master Plan,* December 12, 2011
- Southeast Neighborhoods Subarea Plan, May 24, 2010



• Aurora Square Community Renewal Area Planned Action Draft Environmental Impact Statement, December 2014

Where appropriate, relevant information found in prior environmental and planning documents is referenced and considered in this DEIS.

# **Location of Background Information**

See "Contact Persons" above.

## Availability of this DEIS and Copies for Purchase

This DEIS is posted on the City's home webpage for the project: <u>www.shorelinewa.gov/lightrail</u>, and may be downloaded and reviewed for free. Desk copies are available for review at Shoreline City Hall (17500 Midvale Avenue N, Shoreline, WA, 98133) and at the Shoreline Libraries (345 NE 175<sup>th</sup> Street, Shoreline, WA 98133 and 19601 21st Ave NW, Shoreline, WA 98177).

Copies of this DEIS (printed or on compact discs) may be purchased from the City of Shoreline Department of Planning & Community Development (17500 Midvale Avenue N, Shoreline, WA, 98133, see "Contact Persons") for the cost of production.



# Chapter 1

Environmental Summary DRAFT ENVIRONMENTAL IMPACT STATEMENT



# Chapter 1—Environmental Summary

# **1.1 Introduction**

This chapter summarizes the background, purpose, and location of the Planned Action subarea, mitigation measures, and significant avoidable adverse impacts identified as a result of this Draft Environmental Impact Statement (DEIS) for the 145<sup>th</sup> Street Station Subarea Plan. The State Environmental Policy Act (SEPA) process is further described below in Section 1.2 and in Chapter 2. The summary in this chapter is intentionally brief. Readers should consult individual sections in Chapter 3 of this DEIS for detailed information concerning the affected environment, analysis of potential impacts, and mitigation measures.

# **1.2 Purpose and Background of the Station Subarea Plan and Subarea Location**

### 1.2.1 Purpose and Background

In spring of 2013, the City of Shoreline entered into communitybased visioning and planning to address future land use, transportation, and neighborhood enhancements in the community's light rail station subareas at NE 145th and NE 185th Streets along Interstate 5 (I-5). This DEIS analyzes alternatives associated with the NE 145th Street Station Subarea. The 145th Street Station Subarea Plan is being shaped by public and stakeholder engagement and will result in a plan for transitoriented land uses and zoning provisions in the subarea as well as supporting public space enhancements, multimodal transportation and utility system improvements, and other public infrastructure and amenities associated with the plan.

The City's station subarea planning process is guided by Framework Policies adopted by the City Council in May 2012 as well as specific policies of the Land Use Element (LU20-LU43) adopted into the Comprehensive Plan in December 2012. Other policies and provisions of the City of Shoreline's Comprehensive Plan, as well as citizen visioning work that culminated in Vision 2029, and adopted plans such as the Transportation Master Plan also serve as a foundation for the station subarea plan and will be integrated into the plan as applicable.

The City will adopt the 145th Street Station Subarea Plan and a supporting Planned Action Ordinance and amend its current Comprehensive Plan and the Shoreline Municipal Code, including the Development Code (Title 20), as appropriate to support the adopted subarea plan and ordinance. Adoption of the Planned Action Ordinance would streamline environmental review for redevelopment consistent with the station subarea plan and regulations, in accordance with the State Environmental Policy Act (SEPA) rules.

With the adoption of the Planned Action Ordinance and subsequent implementation, over the next several decades, neighborhoods in the subarea would attract a vibrant mix of land uses that offer additional housing choices, businesses serving the neighborhood, jobs, and recreation opportunities, as well as other services to support new growth. In the vicinity of the new light rail station, redevelopment would create a transit-oriented mix of land uses, increasing the number of residents living in proximity to the station to maximize ridership.

Throughout the process, the public has expressed concerns about how transition and change could impact their neighborhoods and quality of life. This DEIS addresses these questions and issues by examining potential impacts through quantitative measures and recommending mitigations in the form of capital projects or development regulations, and by acknowledging uncertainties inherent in rezoning and redevelopment processes.

#### What Happens after Adoption of the Subarea Plan?

With adoption of the subarea plan and planned action, the City of Shoreline will set the stage for potential redevelopment. The extent and timing of redevelopment that occurs will be influenced by market forces, homeowner and property owner decisions about what do with their properties, and other factors.

This plan does not require that homeowners or property owners redevelop or sell their properties that decision will be theirs.

### 1.2.2 Subarea Location

Through a separate public process for the Lynnwood Link Extension, which included development of a DEIS, Sound Transit identified NE 145<sup>th</sup> Street on the east side of Interstate 5 (I-5), north of the interchange, as the preferred location for one of the two light rail stations to potentially be built in Shoreline. A parkand-ride structure, also to be constructed by Sound Transit, would be potentially located immediately north of the station. The City of Shoreline supports this proposed station location as Sound Transit's preferred alternative for the Lynnwood Link Extension, and identifies the location in the City's Comprehensive Plan Land Use Map.

For the purposes of developing the 145th Street Station Subarea Plan and completing environmental analysis, the City of Shoreline Planning Commission determined study area boundaries through considerations of factors such as policy direction, topography, ability to walk and bike to and from the station, and other existing conditions and influencing factors. The Planning Commission recommended using two study areas with separate boundary lines for the 145<sup>th</sup> Street Station Subarea Plan: one that delineates a land use focus and the other that delineates a mobility (multimodal transportation) focus. These study area boundaries were then reviewed and adopted by City Council as an amendment to the Comprehensive Plan.

Refer to **Figure 1.1** for a depiction of the study area boundaries surrounding the 145<sup>th</sup> light rail station location. *Together, the two study areas make up the "subarea" that is the focus of this planning process.* 



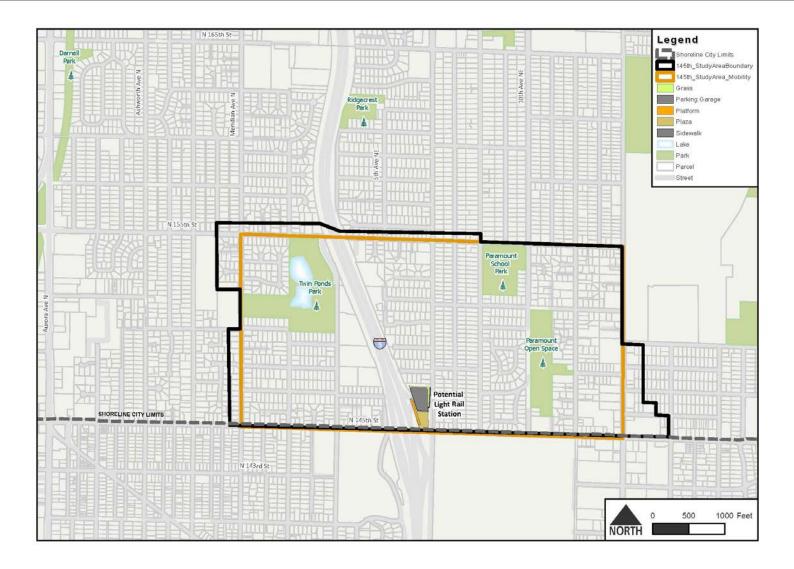


Figure 1.1 Land Use (Black) and Mobility (Gold) Study Area Boundaries, which Together Comprise the Subarea



# **1.3 State Environmental Policy Act** Process

### 1.3.1 Planned Action

The City of Shoreline proposes to designate the 145<sup>th</sup> Street Station Subarea Plan as a Planned Action, pursuant to SEPA and implementing rules. According to the Washington Administrative Code (WAC) 197-11-164, a Planned Action is characterized by the following:

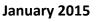
- Designated by a Planned Action Ordinance;
- Analyzed through an environmental impact statement that addresses significant impacts;
- Prepared in conjunction with a comprehensive plan, a subarea plan, a master planned development, a phased project, or with subsequent or implementing projects of any of these categories;
- Located within an Urban Growth Area (UGA);
- Not an essential public facility unless they are accessory to or part of a project that otherwise qualifies as a Planned Action; and
- Consistent with an adopted comprehensive plan (but comprehensive plan and code provisions may be amended as part of the process of adopting subarea plans and planned actions).

Projects meeting these requirements qualify as Planned Action projects and do not require a subsequent SEPA threshold determination, but still require a completed environmental checklist to be submitted. Future projects within the Planned Action area must be reviewed for consistency with the adopted Planned Action Ordinance, as well as City's zoning and development regulations, and development agreement where applicable. Projects within the defined Planned Action area would be required to acquire all necessary permits and satisfy all related public notice requirements, just as with other projects in the city.

The Final Environmental Impact Statement (FEIS) will identify a Preferred Alternative that will be the basis of the Planned Action Ordinance, along with a maximum level of growth allowed within the 145<sup>th</sup> Street Station Subarea. Consistency with this limit would be ensured through monitoring of incoming redevelopment applications and their approval consistent with the Subarea Plan, Planned Action Ordinance, and other applicable City of Shoreline regulations.

### **1.3.2** Prior Environmental Review

While SEPA analysis related to specific land use and zoning changes in the 145<sup>th</sup> Street Station Subarea was not conducted as part of Sound Transit's July 2013 Lynnwood Link Extension DEIS, Sound Transit analyzed conditions in the subarea and surrounding areas that would be affected by the construction of light rail station and supporting facilities. Several topics and areas of analysis in the Sound Transit DEIS also are relevant to this DEIS for the 145<sup>th</sup> Street Station Subarea. In addition, the City of Shoreline Comprehensive Plan; Transportation Master Plan; Parks, Recreation, and Open Space Plan; and other master plans and subarea plans all developed in accordance with SEPA, contain information relevant to the 145<sup>th</sup> Street Station Subarea. Where appropriate, relevant information found in these prior environmental and planning documents is referenced and considered in this DEIS.





# **1.4 Organization of this Document**

This DEIS for the 145<sup>th</sup> Street Station Subarea Planned Action is organized into the following chapters:

- Chapter 1 Summary: This chapter provides a brief discussion of the alternatives (Alternative 1—No Action, Alternative 2—Connecting Corridors, and Alternative 3— Compact Community). This chapter also summarizes the environmental review and the public involvement processes, as well as potential environmental impacts and recommended mitigations measures associated with each alternative.
- Chapter 2 Plans and Policies and Description of Alternatives: This chapter summarizes adopted plans and policies as background for the environmental analysis and provides a more detailed description of the alternatives related to the 145<sup>th</sup> Street Station Subarea.
- Chapter 3 Affected Environment, Analysis of Potential Significant Impacts, and Mitigation Measures: This chapter describes the existing conditions for each environmental topic area and includes an analysis of the potential significant impacts associated with each EIS alternative, for twenty-year and build-out timeframes. Recommended mitigation measures to reduce impacts to less than significant levels are also discussed. The following environmental topics are addressed:
  - 3.1 Land Use Patterns
  - 3.2 Population, Housing, and Employment
  - 3.3 Multi-Modal Transportation

- 3.4 Streams, Wetlands, and Surface Water Management
- 3.5 Parks, Recreation, Open Space, Wildlife Habitat and Trees
- 3.6 Schools, Police, Fire, and Other Public Services3.7 Utilities
- Chapter 4 References: This chapter contains a list of all documents and personal communications referenced in the analyses contained in Chapter 3.
- Chapter 5 Distribution List: This chapter contains a list of all government agencies and community groups who will receive notices of availability or copies of the DEIS.

# **1.5 Public and Stakeholder**

# **Involvement and the Planning Process**

Public and stakeholder involvement has been an integral part of developing the 145<sup>th</sup> Street Station Subarea Plan. The City of Shoreline provided opportunities for public, stakeholder, and agency engagement, including review and comment throughout the planning and environmental review process. Refer to **Figure 1.2** and **Figure 1.3** for graphic depictions of the subarea planning timeline and steps in the environmental review and plan adoption process. Community and stakeholder engagement and outreach activities included the following.

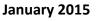
• **Project Webpages.** The City created project webpages for the subarea plan and environmental impact statement, accessible via: <u>www.shorelinewa.gov/lightrail</u>. The information on the webpages provides background

information on the subarea plan and environmental impact statements, describes the schedule, and provides links to relevant documents as they are released for public review. Contact information for City staff is also provided to allow the public to submit comments or ask questions about the subarea plan and environmental impact statements. In the future, information related to the Planned Action Ordinance and FEIS also will be posted on the webpages.

- DEIS Scoping Comment Period. Public and agency comments were solicited in a 21-day scoping period from October 1 to October 31, 2014. During this period, the general public, as well as public agencies and stakeholders, were invited to submit written comments on the scope of the EIS and offer written suggestions. The scoping notice is provided in the Appendix. The list of environmental elements and topics to be studied in this DEIS was confirmed based on public and stakeholder input received.
- Community Workshops/Public Meetings. The City held visioning workshops in the summer and fall of 2013 to gather public comments and ideas on the vision for the station subarea. A public and stakeholder Design Workshop series was held in May and June of 2014, including separate meetings with the 145SCC and a general community workshop. Participants were engaged in planning exercises to brainstorm about potential ideas and options for organization of land uses in the subarea. The City also hosted a second Design Workshop in October 2014, which served as an opportunity for

"scoping" (determining which elements and potential zoning scenarios would be studied in the DEIS), and presenting land use scenarios and community design possibilities for how the subarea could redevelop, based on ideas from the May and June workshop sessions.

- DEIS Comment Period and Public Meeting. This DEIS was released for public review on January 17, 2015, initiating a comment period through February 17, 2015. The general public, as well as public agencies and stakeholders are invited to submit comments on the alternatives, identified environmental impacts, and mitigation measures. A public meeting is scheduled for January 22, 2015 to present the DEIS and gather public input. An Open House is scheduled prior to the Planning Commission public hearing on February 5. See the Fact Sheet in this DEIS for more information.
- Selection of Preferred Alternative Zoning Scenario and Final EIS The Planning Commission will likely make a recommendation on a Preferred Alternative zoning scenario to be studied in the FEIS on February 5. Council is slated to select the Preferred Alternative on February 23.
- Plan Adoption. The Planning Commission and City Council will continue to hold meetings on the FEIS, subarea plan, design standards, and provisions of the planned action ordinance through April and May 2015. City Council review and adoption of the subarea plan and planned action ordinance is scheduled for June 2015.





#### Refer to the City's website:

www.shorelinewa.gov/lightrail for a schedule of meetings and other important information related to the subarea planning process.

# **1.7 Objectives and Overview of** Alternatives

### Objectives

Washington's State Environmental Policy Act (SEPA) requires a statement of objectives that address the purpose and need for the proposal and around which reasonable alternatives can be evaluated. The following objectives are provided to address the purpose and need for the 145<sup>th</sup> Street Station Subarea Planned Action.

- Plan for future redevelopment of the 145<sup>th</sup> Street Station Subarea in Shoreline by defining transit-oriented land use options that will increase and support the opportunity for more existing and future residents' to conveniently access transit.
- Create a vibrant, transit-oriented station subarea that enhances neighborhood character and provides amenities such as signage and wayfinding elements, parks, open space and community gathering areas, public art, lighting, and streetscape features.
- Increase housing choices and options for all income levels, including affordable housing.

- Introduce opportunities for neighborhood business, shopping, and services.
- Encourage use of multimodal transportation modes by:
  - Enhancing bicycle, pedestrian safety and mobility;
  - Improving local transit connections to and from the light rail station;
  - Minimizing traffic impacts to surrounding neighborhoods through traffic calming, as well as improvements to intersections and streets; and
  - Identifying mechanisms to manage parking in the subarea.
- Protect environmentally sensitive areas including streams, wetlands, water quality, and wildlife habitat areas.
- Foster economic development.
- Promote sustainable development by encouraging green building and green infrastructure treatments in the subarea.
- Plan for appropriate transitions between new and existing development through a phased program for change that is compatible with the community's vision for the subarea.



# 145th Street Station Subarea Plan Schedule

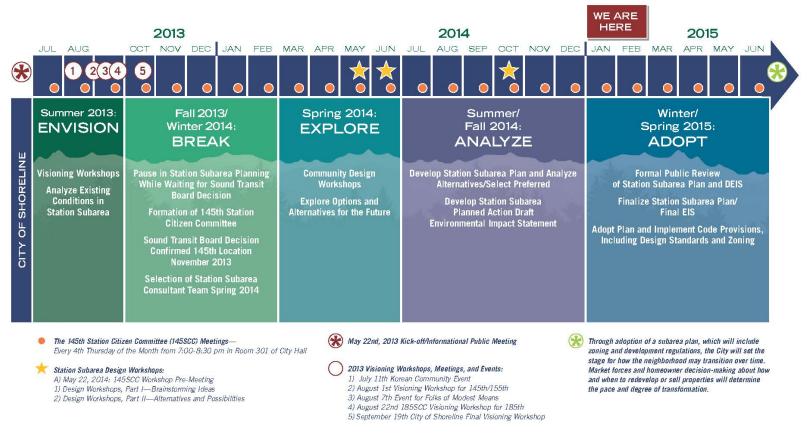
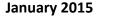


Figure 1.2 Subarea Planning Process/Timeline







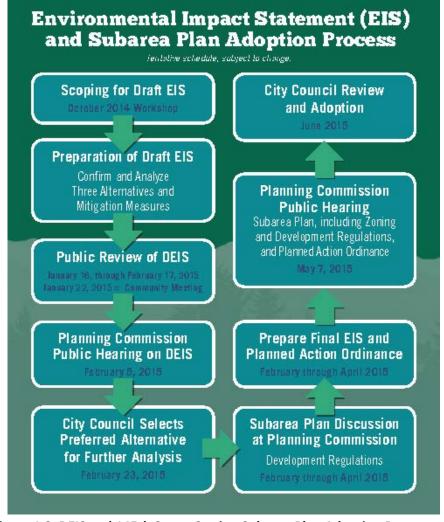


Figure 1.3 DEIS and 145th Street Station Subarea Plan Adoption Process



#### **Overview of the Alternatives**

This DEIS evaluates three alternatives that establish a range of land use patterns and development types within the 145<sup>th</sup> Street Station Subarea. These include:

- Alternative 1—No Action
- Alternative 2—Connecting Corridors
- Alternative 3—Compact Community

These potential zoning scenarios are based on three main influences: concepts that emerged from the community Design Workshops, direction in existing local and regional plans, and a Market Assessment that was performed for this subarea. The purpose of analyzing multiple scenarios is to understand potential impacts of different land uses and get public input on preferences. For example, do people prefer a scenario that is more spread out with lower heights, or one that is more compact with potentially taller buildings? If the former, would they prefer that the "main street" envisioned during the Design Workshops be along 5<sup>th</sup> Avenue or 155<sup>th</sup> Street? The City acknowledges that many residents would prefer the No Action scenario; however, that would not implement local and regional policies regarding densities that support neighborhood-serving businesses and transit in future station areas.

For more information about land use and redevelopment characteristics related to the three alternatives, refer to Chapter 3, Section 3.1 of this DEIS. For more information about population and growth rate assumptions, refer to Chapter 3, Section 3.2. For each alternative, the DEIS analyses potential impacts at buildout as well as resulting from expected growth over the next twenty years (up to 2035).

#### Alternative 1—No Action

Under the Alternative 1—No Action, the 145<sup>th</sup> Street Station Subarea Plan would not be adopted, and existing planning and zoning provisions would remain. With Alternative 1—No Action, the light rail station and park and ride structure would be constructed. However, current zoning and development regulations in the station subarea would not change, and there would not be opportunities for transit-oriented development that would increase the number of residents in proximity to the light rail station. Improvements and enhancements associated with new development would not occur and capital investment in the subarea would be limited.

Because property owners would still be allowed to maximize development potential under existing zoning, it is anticipated that some property owners may choose to add accessory dwelling units or increase the number of dwelling units on their existing parcels. As such, population in the subarea would be expected to increase to a total of 11,040 people within the next twenty years (by 2035 or sooner). Compared to the 2014 estimated population of the subarea of 8,321, this would be an additional 2,719 people.

Also under Alternative 1—No Action, there would be an expected 4,600 households and 2,325 jobs within the station subarea by 2035 or sooner, compared to the 2014 levels of 3,467 households and 1,595 jobs. In summary, under Alternative 1—No Action an



estimated 1,133 new households and 730 new jobs would be added in the subarea by 2035.

#### Alternative 2—Connecting Corridors

During Design Workshops, one concept that emerged was to create a "main street" corridor to connect to established commercial areas. This growth scenario includes both 5th Avenue and 155th Street as potential connecting corridors between station subareas; commercial districts at 165th Street, 15th Avenue, and Aurora Avenue N; and the Community Renewal Area at Aurora Square. It is a combination of previous versions of maps that emphasized the 5th Avenue and 155th Street corridors individually. Because potential development in this scenario is more spread out, lower density zoning is analyzed in several locations compared to the Compact Community scenario. Studying this alternative with regard to potential impacts and mitigations would provide for a variety of options for future consideration.

Alternative 2—Connecting Corridors would increase the population of the subarea to 34,643 at full build-out. This growth would facilitate the opportunity for 14,435 total households and approximately 11,747 total jobs in the station subarea at buildout, including the existing commercially zoned district at NE 145<sup>th</sup> Street and 15<sup>th</sup> Avenue NE and commercial use at the west edge of the subarea near Aurora Avenue N. This would result in a net increase of 29,322 people, 10,968 households, and 10,152 jobs in the subarea (over current levels). Growth and change would be expected to occur gradually, over many decades. Based on regional growth trends, it is anticipated that full build-out would take approximately 60 to 94 years (2075 to 2109) or longer to be realized.

#### Alternative 3—Compact Community

This scenario does not emphasize corridors and focuses potential growth solely on the area within roughly a ½ mile radius of the future light rail station. Because potential development in this scenario is concentrated, higher density zoning is analyzed in several locations compared to the Connecting Corridors scenario. Studying higher intensity in the DEIS allows for a variety of options for future discussion because Council may not consider final zoning beyond what was analyzed through the EIS process, but may consider something less intensive.

Alternative 3—Compact Community would increase the population in the subarea to approximately 36,647 people and facilitate the opportunity for approximately 15,270 total households and 9,639 total jobs in the subarea, including the existing commercially zoned district at NE 145<sup>th</sup> Street and 15<sup>th</sup> Avenue NE and commercial use at the west edge of the subarea near Aurora Avenue N. This would result in a net increase of approximately 28,326 people, 11,803 households, and 8,044 jobs in the subarea at full build-out (over current levels). Based on regional growth trends, it is anticipated that full build-out would take approximately 63to 98years (2078 to 2113) or longer to be realized.

# 1.8 Significant Areas of Controversy and Uncertainty, and Issues to be Resolved or Monitored

In summary, adoption of the 145<sup>th</sup> Street Station Subarea Planned Action, which would implement the zoning alternative selected by City Council (to be identified in the future FEIS), would provide additional housing and employment options, increasing the number of people living and working in proximity to the light rail station.

Under any action alternative, the plan would be facilitated by changes in land use and zoning, as well as development provisions such as building height requirements, design standards, and parking ratios. Plan and regulation changes, along with capital improvements, and other measures will support redevelopment of the area to more intensive mixed-use character consistent with the region and City's vision for light rail station areas.

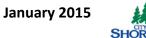
This represents a significant change from the current single-family character of the subarea, and as such, many residents have concerns about how transition will impact their future and quality of life.

While new development would result in a variety of neighborhood and transportation improvements, along with development of parks and public spaces, a greater variety of housing choices to fit various incomes, and other community amenities, there are several areas of uncertainty and issues to be resolved as the plan moves into implementation, both in the twenty year and build-out timeframes.

#### Changes in Neighborhood Character

The station subarea would change from a predominantly single family neighborhood to a more urban neighborhood with a mix of densities, including single family housing around the periphery transitioning to various types of attached single family, and then to multifamily and mixed use in areas nearest to the station. Major areas of concern include how transitions in the character of the neighborhood, and physical transitions between different land uses, will be managed. While the proposed changes in zoning and use mix would alter the look and feel of the subarea, this change would occur incrementally over many decades. This long timeframe does create a level of uncertainty, but also provides the ability to implement improvements to support growth. While it is beyond the timeframe that most families plan for, it can facilitate discussions about long-range household goals and preferences, and hopefully provide additional options such as more senior housing for the aging Baby Boom generation and rental housing for the Millennial generation.

Both positive and negative perspectives have been expressed by residents of the subarea. Some residents have expressed excitement about the coming of light rail and changes that it could bring to the neighborhood, including additional restaurants and sidewalks. Some have expressed their hope that increased demand and property values could enable them to sell their houses, which in some cases are underwater following the Great Recession. Some have expressed their disapproval regarding this level of change and have questioned why the coming of light rail



should be accompanied by significant upzoning. Others want to know whether they should make planned improvements to their homes, or invest in another area where single-family character is more likely to be preserved.

The City acknowledges that even though a decision to stay or sell is entirely up to the property owner, those who feel as if their neighborhood is changing beyond their comfort level may still feel forced out. The City also acknowledges that even for those who support change, transitions and construction can be uncomfortable and unpleasant.

The purpose of this EIS analysis is not to presume that all impacts of change can be mitigated or predicted, but to identify potential issues and determine solutions that can minimize adverse consequences and facilitate improvements. It is not to sugar-coat undesirable consequences of transition, but to acknowledge that while uncertainty exists and people are naturally skeptical of change, especially if they feel it was imposed upon them, the City and community have worked hard to create an ambitious longrange vision, and developed mechanisms to bring it to fruition.

The following topics have been identified as areas that may be unpredictable, and should therefore be monitored closely over time.

#### The Pace of Redevelopment, Market Forces, and Complexity of Property Aggregation

The central Puget Sound region is one of the fastest growing metropolitan areas in America. Seattle, Shoreline's neighboring city to the south, grew faster than any other major American city in 2013, according to the US Census Bureau, with approximately 18,000 people moving to the city in the one-year period. Seattle is the 21<sup>st</sup> largest city in the US. Seattle's growth rate from July 1, 2012 to July 1, 2013 was 2.8 percent, the highest rate among the 50 most populous US cities, bringing the total 2013 population to 652,405. From July 1, 2012 to July 1, 2013, the Seattle-Tacoma-Bellevue metropolitan area ranked tenth in numerical population growth of metropolitan areas of the US, adding 57,514 people. According to Puget Sound Regional Council's 2040 Transportation Plan, our region will add 1.4 million people and 1.1 million jobs by 2040.

Washington State's overall population is currently 6,951,785 and is forecasted to grow by just above 1 percent per year through 2025 and then at less than 1 percent per year through 2040 according to the Washington State Office of Financial Management.

In looking at growth rates of regional cities, communities in the Puget Sound region have grown at various rates, between less than 1 percent, to about 3 percent annually between 2010 and 2013.

In a review of other transit-oriented districts around light rail and high-capacity transit in the US, growth rates have varied greatly. However, average annual growth rates of around 2 percent are often achieved, but are influenced by a variety of factors.

Based on recent information released by the US Census Bureau, the 15 fastest growing cities in America with populations of 50,000 and larger (similar to Shoreline's size) grew between 3.8 percent (Pearland, Texas) and 8 percent (San Marcos, Texas) between 2012 and 2013.



While Shoreline's population was stable with little growth up to 2010, the population of the community is expected to continue to grow as more housing and employment opportunities are developed. Seattle and other regional cities also are forecasted to continue to grow over the next couple of decades.

The opportunity and potential for growth in the 145<sup>th</sup> Street Station Subarea would be higher with the adoption of the proposed mixed use zoning under the two action alternatives. However, growth would be moderated by potential challenges related to redevelopment, such as the need to aggregate parcels to create sites large enough for mixed use and multifamily housing, as discussed in Section 3.1. Uncertainty about the market and property owners' interests in redeveloping or selling their properties also moderates the forecast for growth.

#### With all of these considerations, the anticipated average annual growth forecasted for the subarea is around 1.5 percent to 2.5 percent. This is the assumed growth rate for purposes of subarea planning and environmental analysis.

An area of uncertainty relates to unknowns about the time frame in which change will occur and the pace of growth and development. While the DEIS has projected an average annual growth range of 1.5 percent to 2.5 percent, the actual rate of growth may fluctuate from year to year.

There also are questions about how much redevelopment the market might support over time, and the overall quality of development. There is added complexity involved in the need to aggregate enough parcels for larger scale redevelopment. There also are unknowns about when and where specific redevelopment might occur in the subarea. Many single family homeowners will prefer to stay or purchase within the subarea, and single family use could continue for many years without redevelopment. It is possible that creating new areas for mid-rise multifamily and mixed-use development will unlock pent-up demand for such products, which may support initial growth in the subarea. It is not likely that market forces and the process of parcel aggregation would facilitate development of multifamily and mixed use buildings tall enough to maximize height allowances in MUR-85' or -65' zones in the near-term. However, allowing for greater choice and flexibility through zoning revisions in the subarea reduces certainty about where initial and subsequent phases of redevelopment will occur.

#### Possible Real Estate Speculation as Well as Uncertainty about the Future

Property owners have expressed concerns that real estate investors may be interested in purchasing single family homes and holding them as rentals until the time is right for redevelopment in the future. Some homeowners in both station subareas have already received letters offering fair market value, possibly because investors believe that properties will be less expensive before zoning changes or light rail service is operational. This type of speculative buying could occur regardless of whether or not the City was planning to rezone areas surrounding future stations immediately. One reason to implement zoning change sooner rather than later is to provide long-term predictability regarding what type of uses will be allowed where, and ample time for homeowners to become informed about the potential for change and determine their own long-range plans. For those that choose to sell, understanding



the long-term potential of the property may allow them to capture additional value.

#### Available Funding for Infrastructure Improvements

Funding for street, intersection, and other transportation improvements, as well as utility upgrades and local transit programs is constrained. While there will be a substantial need for improvements to serve the potential growth in the subarea, funding for these projects is not secured. The City and other utility and service providers will need to reprioritize investments and aggressively seek funding to support redevelopment in the subarea. Another reason to undergo subarea planning a decade before the trains start running is to identify projects and potential funding sources as soon as possible.

# **1.9 Significant Unavoidable Adverse Impacts**

This section addresses the potential for significant unavoidable adverse impacts, summarizing the results of the environmental analysis. While there are several areas of controversy and uncertainty and issues to be resolved over time, there is a long range horizon to proactively plan for and support build-out of the plan for redevelopment.

As long as investments are prioritized and infrastructure (transportation and utilities) improvements and public services (schools, parks and recreation, police, fire and emergency, City services and other human services) are increased over time to keep pace with growth and to mitigate the impacts identified in this FEIS, no significant unavoidable adverse impacts would be anticipated with implementation.

#### Land Use Patterns, Plans and Policies

The two action alternatives would result in greater intensity of land uses, housing, and employment in the subarea than Alternative 1—No Action. While implementation of one of the action alternatives would require updating the City's Comprehensive Plan and revising Development Code regulations and standards, the proposed changes to land use patterns under either of these conform to and support the City's Comprehensive Plan policies and regional vision for light rail station subareas.

Impacts on land use compatibility would be mitigated with implementation of design and transition standards in the City's Development Code, along with new regulatory provisions adopted to support the subarea plan. Required Comprehensive Plan amendments include updating the land use map, which would be adopted concurrently with the 145<sup>th</sup> Street Station Subarea Plan and Planned Action Ordinance and other policy amendments, which would be adopted as part of the 2015 docket cycle. With implementation of a high-capacity transit-supportive alternative and application of mitigation measures and amendments, no significant unavoidable adverse impacts on land use patterns, plans, and policies would be anticipated.

#### Population, Housing, and Employment

Implementation of either of the action alternatives would result in a variety of housing types, as well as an increased quantity of housing choices to fit various income levels and household size needs in the subarea. Alternative 3 would result in several hundred more housing units at full build-out than Alternative 2. Alternative 2 would result in more employment opportunities than Alternative 3. Development Code provisions and additional mitigation measures would encourage affordable housing options in the subarea. With application of mitigation measures and Development Code amendments, no significant unavoidable adverse impacts on housing would be expected.

Under Alternative 1—No Action, future housing opportunities would be limited to primarily various types of single family. As such, Alternative 1—No Action would not accommodate the same range of housing needs as either of the action alternatives. Alternative 1 would not be as beneficial in meeting community and regional objectives related to expanding housing options, including affordable housing. Under existing zoning, there could be a concern that existing single family homes would be demolished over time and replaced with larger homes, which is inconsistent with adopted policies. Alternative 1 also does not help the in meeting jobs-to-housing ratio goals for Shoreline.

#### **Multimodal Transportation**

Although the effects of additional vehicles in creating traffic congestion can be mitigated to varying degrees through the proposed transportation improvements, the actual increases in traffic under any of the alternatives would be considered an unavoidable impact. The significance and negativity of this impact can be mitigated with improvements and transportation demand management over time. Increases in traffic would occur under all alternatives as a result of growth in traffic throughout the city and in the subarea. Traffic would increase regardless of redevelopment activities due to development of the light rail station and park and ride parking structure. The rate of growth and change in the subarea would occur very gradually, over many decades. Development of the one of the action alternatives as the preferred alternative would occur incrementally over time, allowing increases in traffic to be addressed with planned improvements and transportation demand management over time, meeting City concurrency standards.

A basic goal of implementing high-capacity transit in the region is to reduce the overall impact of traffic and provide more opportunities for citizens to travel via fast, efficient, and reliable services. The more people living and working near light rail transit stations, the more opportunities there would be for people to use the high-capacity transit system, rather than drive to and from destinations. This, in turn, would result in beneficial effects to the environment such as reductions in traffic-generated pollution and greenhouse gas emissions in the region.

# Wetlands, Streams, and Surface Water Management

Wetlands, streams, and other critical areas would be protected by City of Shoreline requirements, as well as applicable state and federal regulations. There are opportunities to enhance existing stream corridors and wetlands in the subarea as part of redevelopment efforts. Redevelopment projects will be subject to more stringent surface water management regulations than were in place with the subarea originally redeveloped into single family subdivisions. Additionally, installation of green infrastructure and low impact development techniques will address surface water



runoff and flows and water quality. Stormwater facilities would be improved and expanded as needed to serve new site development and to address flooding and drainage problems that exist in some areas today. Overall, it is expected that water resource areas and related habitat functions would be improved with redevelopment over time, resulting in better conditions than exist today.

# Parks, Recreation, Open Space, Natural Areas, and Priority Habitat Areas

Parks, recreation facilities, open space and natural areas, and wildlife habitat are cherished elements of the subarea by residents. The concept of creating a green network that prioritizes improvements in these areas and enhances connectivity throughout the subarea is being explored under both action alternatives. With increased population and households over time, there will be demand for additional parks and recreation facilities. It is anticipated that the City will be able to monitor the needs for these facilities and address these needs over many decades as the subarea redevelops. As such, no significant unavoidable adverse impacts are anticipated.

## Schools, Police, Fire and Other Public Services

Additional public services such as schools, police, fire, emergency services, solid waste, and other services would be required to serve population growth under the alternatives, and there would be a substantially higher demand for public services under either of the two action alternatives than under Alternative 1—No Action. The demand for increased services and facilities would

occur gradually, over many decades. Increases in housing and employment would generate additional revenue and funding for services.

Development fees, sales tax revenues, property taxes generated from new households, customer service charges to new customers, and other project funding would offset the costs of providing additional public services, keeping pace with demand. As such, no significant unavoidable adverse impacts are anticipated.

### **Utilities and Energy Use**

The growth in residential and employment population would increase the demand for utilities (water, wastewater, communications, and energy services) under any of the alternatives. Of the two action alternatives, Alternative 2 would generate the most demand due to the geographic extent proposed, followed by Alternative 3.

Because growth would occur gradually over many decades, customer fees, service charges, and other funding would offset the costs of providing additional utility services, allowing service providers to fiscally manage the increased demand. Green building, energy conservation habits, and the potential for district energy solutions would help to mitigate increased demand.

No significant unavoidable adverse impacts would be anticipated. However, coordination between the City, utility providers, developers, and other entities such as Sound Transit, in construction of capital projects would be critically important to minimize disruption.

# Chapter 2

Description of the Alternatives DRAFT ENVIRONMENTAL IMPACT STATEMENT



# **Chapter 2—Description of the Alternatives**

# 2.1 Introduction

The City of Shoreline has entered into this subarea planning process to more directly and fully address future land use and transportation needs in the NE 145<sup>th</sup> Street Station Subarea. As an outcome of this planning process, the City will adopt the *145<sup>th</sup> Street Station Subarea Plan* and a supporting Planned Action Ordinance. The City also will amend its Comprehensive Plan, zoning, and development regulations to support implementation of the plan. In the coming years, the City will also need to revise its Capital Improvement Plan, and Transportation and other Master Plans to further support implementation. While the *145<sup>th</sup> Street Station Subarea Plan* is consistent with and supports the City of Shoreline's Vision 2029, Comprehensive Plan, Transportation Master Plan, and other adopted plans and policies, the Comprehensive Plan map and related provisions and the Shoreline Municipal Code (including zoning and development regulations) would need to be amended to support the planned action.

Because this DEIS addresses amendments to the City's Comprehensive Plan, zoning, and regulations, this chapter provides planning background information. Section 2.2 outlines planned action procedures. Section 2.3 introduces the DEIS alternatives. Section 2.4 describes the environmental review process, and Section 2.5 provides planning and policy background information. Refer to Chapter 1 for a description of the subarea context including the land use and mobility study area boundaries that together constitute the subarea boundary. Chapter 1 also presents objectives for the 145<sup>th</sup> Street Station Subarea to demonstrate the purpose and need for the planned action.

# 2.2 Planned Action Provisions of the State Environmental Policy Act

As part of the subarea planning process, and consistent with the State Environmental Policy Act (SEPA) rules, the City intends to adopt a Planned Action Ordinance to support the 145<sup>th</sup> Street Station Subarea Plan.

The Washington state legislature adopted the planned action process for SEPA to emphasize quality environmental review of early planning efforts and early public input to shape decisions. Basic steps in designating and implementing planned actions are to:

- Prepare an environmental impact statement (EIS);
- Designate the planned action improvement area by ordinance, where future projects would develop consistent with the EIS analysis; and



• Review permit applications for future projects for consistency with the designated planned action (based on an environmental checklist prepared by project proponents to compare proposed improvements to the planned action analysis).

This DEIS (and the future FEIS) addresses step 1 identified above by analyzing the potential environmental impacts related to the alternatives and prescribing mitigation measures to address potential impacts. The analysis in the DEIS addresses variations within the alternatives related to land use and zoning, and the extent of growth and development that would result from implementation.

The intent of the planned action process is to provide more detailed environmental analysis during formulation of planning proposals, rather than at the project permit review stage. As long as redevelopment projects are consistent with the analysis in the DEIS (and the future FEIS), which they would document through an environmental checklist, individual projects would not be required to complete further environmental analysis.

A planned action designation by a jurisdiction reflects a decision that adequate environmental review has been completed and further environmental review under SEPA, for each specific development proposal or phase, would not be necessary if it is determined that each proposal or phase is consistent with the development levels specified in the adopted Planned Action Ordinance and supporting environmental analysis. If a planned action project is not consistent with the land use and zoning intensities studied in the DEIS and FEIS, a supplemental environmental impact statement may be required of the project.

Although future proposals that qualify as fitting within the threshold of the planned action would not be subject to additional SEPA review, they would be subject to application notification and permit process requirements. For projects located within the proposed MUR-85' or MUR-65'zones, with proponents choosing to proceed through a development agreement, additional public review also would be part of that process.

The Planned Action Ordinance would be expected to help catalyze redevelopment and revitalization in the light rail station subarea. Property owners and potential developers would be encouraged to redevelop by the more predictable development process that takes place under the planned action process. This DEIS helps the City identify impacts of development and specific mitigation measures that developers would have to meet to qualify for a planned action project.

#### **Planned Action Ordinance**

The Planned Action Ordinance will encourage redevelopment and revitalization of the station subarea by reducing the amount of environmental analysis for individual projects, as long as they are consistent with the environmental analysis completed at this earlier stage. According to WAC 197-11-164, a planned action has the following characteristics:



- Is designated a planned action by ordinance;
- Has had the significant environmental impacts addressed in an EIS (such as this DEIS and the future FEIS);
- Has been prepared in conjunction with a comprehensive plan, subarea plan, master planned development, phased project, or with subsequent or implementing projects of any of these categories;
- Is located within an urban growth area;
- Is not an essential public facility; and
- Is consistent with an adopted comprehensive plan.

WAC 197-11-168 requires that a Planned Action Ordinance include:

- A description of the components of the planned action;
- A finding that the probable significant environmental impacts of the planned action have been identified and adequately addressed in an EIS; and the identification of mitigation measures that must be applied to a project for it to qualify as a planned action project.

Following the completion of the environmental impact statement process, the City intends to designate the 145<sup>th</sup> Street Station Subarea as a planned action by ordinance, pursuant to SEPA and implementing rules. The ordinance will identify mitigation, as described in this DEIS, which would be applicable to future planned action projects. Some of the mitigation measures would apply to all study area projects, while others would be applied on a case-by-case basis. Planned action projects exclude essential public facilities.

# 2.3 Introduction to the DEIS Alternatives

#### **2.3.1** Overview of the DEIS Alternatives

This DEIS analyzes three alternatives:

- Alternative 1—No Action (No Action Alternative)
- Alternative 2—Connecting Corridors (Action Alternative)
- Alternative 3—Compact Community (Action Alternative)



Refer to Section 3.1 for graphic figures of the three alternatives.

Under all three alternatives, it is assumed that the proposed light rail station would be constructed, along with a park-and-ride structure for 500 cars and other improvements in the vicinity of the station.

Alternatives 2 and 3 are often referred to as the "action alternatives" in this DEIS, and Alternative 1 is the "no action alternative."

If implemented, either of the two action alternatives are consistent with the City's Comprehensive Plan, but would require some modifications to the Comprehensive Plan map and descriptions of land uses, as well as zoning, and development regulations. Alternative 1—No Action would retain existing Comprehensive Plan and zoning designations, but is inconsistent with and does not support existing adopted policies at the local, regional, state, and federal levels. For example, Alternative 1—No Action does not align with the City's adopted Comprehensive Plan and other adopted plans that call for more intensive use around future light rail stations. This is more fully described in Section 3.1 of this DEIS.

#### Development of Action Alternatives Shaped by Community Design Workshops

Public input received at community design workshops helped guide the development of alternatives analyzed in the DEIS. As a result of multiple workshop sessions with the public and stakeholder groups, proposed redevelopment in the action alternatives looks at two different ways of organizing multifamily and mixed use redevelopment in the station subarea. One purpose of analyzing different zoning scenarios in a DEIS is to understand impacts of alternatives and solicit public opinion about options.

Alternative 2—As described in Chapter 1, Connecting Corridors spreads multifamily and mixed use along two key corridors—N-NE 155<sup>th</sup> Street and 5<sup>th</sup> Avenue NE, although it is worth repeating that if this alternative were selected, one of these corridors would likely also be selected as the "signature street". This is one of the options about which decision-makers request feedback. Alternative 3—Compact Community locates multifamily and mixed use within a more compact area around the planned light rail station location. Both alternatives propose new redevelopment near and around existing parks and open space in the subarea (Twin Ponds, Paramount, etc.). This was a common suggestion of participants in the community workshop based on creating a livable transit community that gives people access to parks and open space assets.

There were mixed perspectives among community workshop participants about what the maximum height for new redevelopment should be in the subarea. Some wanted the height to be below three stories, but since the current height limit in single family zones is 35 feet, it is unlikely that the City would reduce development capacity in station subareas. Other participants suggested buildings no taller than five stories, and this is reflected in significant portions of the potential zoning scenarios. Others recommended buildings of seven stories or



taller focused around the light rail station; this is also reflected in zoning scenarios. Overall, height was a sensitive issue in community meetings with residents who live in the station subarea. For more information about the public and stakeholder involvement process, refer to Chapter 1 of the DEIS.

#### Estimated Pace of Growth

The estimated pace of growth analyzed in the DEIS action alternatives is 1.5 percent to 2.5 percent annual growth per year. This is based on analysis of current growth rates in the region, as well as the anticipation that the rate of growth may increase with the allowance of higher density zoning in the subarea. For more information about the expected pace of growth and population demographics, refer to Section 3.2 of the DEIS.

#### The First Twenty Years of Implementation Compared to Build-Out

The first twenty years of implementation under either of the action alternatives would create a similar level of change in the subarea, because all alternatives would be expected to grow and change at the same pace (1.5 percent to 2.5 percent). Each of the two action alternatives would reach build-out of proposed zoning at different time frames since varying levels of zoning change would occur under each.

Because the expected pace of growth would be the same for the two action alternatives, potential impacts related to implementation would be similar under each, with the exception that the extent of potential change under Alternative 2 covers more geographic area than under Alternatives 3.

Because the level of impacts over the first twenty years of implementation under either of the action alternatives would be expected to be similar, mitigation measures related to each action alternative also would be similar for the first twenty years. The similarity in anticipated impacts and recommended mitigation is presented in the impact summary charts presented in Chapter 1 and the action analysis presented in Chapter 3.

Long term impacts under each alternative would vary because of the extent of rezoning proposed. At full build-out Alternative 2— Connecting Corridors would require the most utility and transportation improvements and upgrades, as well as the highest level of public services to serve the proposed growth (because this alternative at build-out would cover a greater geographic extent than under Alternative 3—Compact Community).

## **Build-Out Time Frames**

Estimated build-out time frames for the two action alternatives based on the estimated pace of growth are shown in the table below.



	Estimated Build-Out Time Frames	
Alternative 2—Connecting	Alternative 3—Compact	
Corridors	Community	
60 to 94 years	63 to 98 years	
by 2075 to 2109	by 2078 to 2113	

 Table 2-1

 stimated Build-Out Time Frames for Action Alternatives

The current average density in the subarea is 3.2 dwelling units per acre even though most of the subarea is zoned R-6 (6 dwelling units per acre) and higher. It is expected that density would continue to increase in the subarea if no rezoning were to be implemented, and likely property owners would seek to maximize density to the limits allowed over time. However, the timeframe of build-out to the allowed density is uncertain. Achieving the full allowed density under current zoning may never occur. Not all single family property owners may want to add units to their homesites, and the extent of those who would add units (and the timeframe when this would occur) is unknown.

#### Planning Horizon Year 2035—Expected Growth and Change under Either Action Alternative

While the proposed zoning scenarios under the action alternatives represent a long term vision for the subarea, the subarea plan and related capital improvement recommendations focus on the next twenty years of implementation, consistent with Washington State Growth Management Act provisions. The planning horizon year referenced consistently throughout the DEIS and FEIS is **2035**. Implementation of either action alternative would be expected to increase population, households, and employment in the subarea. An estimated average annual growth rate of 1.5 percent to 2.5 percent is assumed for planning and analysis purposes. For more information about why this growth rate is assumed and about population, housing, and employment conditions and forecasts, refer to Section 3.2 of this DEIS.

**Table 2-2** shows current estimated population, household, and employment levels within the subarea. **Table 2-3** shows estimated twenty-year and build-out population, household, and employment projections for the alternatives. **Table 2-4** shows the projected net increases in population, household, and employment levels over current levels.



Estimated Totals for Subarea Based on Available GIS Data, 2014		
Population	8,321	
Households	3,467	
Employees	1,595	

Note: the current estimated population of the City of Shoreline is 54,790.

Population, housing, and employment levels forecast for the station subarea only include the City of Shoreline subarea area geography. Land area south of N-NE 145<sup>th</sup> Street, inside the City of Seattle limits is not included in this study area.



Conceptual illustration of live/work units and multifamily buildings proposed in West Seattle (Johnston Architects); example of redevelopment possibility under the MUR-35 zoning category

Table 2-3 Estimated Twenty-Year and Build-Out Population, Households, and Employment Projections

Alternative	Alternative 3—	Alternative 2—	
1—	Compact	Connecting	
No Action	Community	Corridors	



2035	11,208 to 13,364	11,208 to 13,364	11,040
Population*			
2035	4,670 to 5,681	4,670 to 5,681	4,600
Households*			
2035	2,180 to 2,678	2,180 to 2,678	2,325
Employees*			
Build-Out	34,643	36,647	**
Population			
Build-Out	14,435	15,270	**
Households			
Build-Out	11,747	9,639	**
Employees			
Build-Out	60 to 94 years by	63 to 98 years by	**
Years	2075 to 2109	2078 to 2113	

\* Projections assume 1.5 percent to 2.5 percent annual growth rate for the action alternatives from the time the rezoning is adopted.

\*\* For Alternative 1—No Action, only projections through the twenty year horizon of 2035 were analyzed. Build-Out was not analyzed because the timeframe is for this is unknown and difficult to approximate.



	Alternative 2—	Alternative 3—	Alternative 1—
	Connecting	Compact	No Action
	Corridors	Community	
2035	+2,886 to	+2,886 to	+2,719
Population	+5,314	+5,314	
2035	+1,203 to	+1,203 to	+1,133
Households	+2,214	+2,214	
2035	+585 to 1,083	+585 to 1,083	+730
Employees			
Build-Out	+26,322	+28,326	
Population			
Build-Out	+10,968	+11,803	
Households			
Build-Out	+10,152	+8,044	
Employees			

Table 2-4 Projected Net Increases in Population, Housing, and Employment over Current (2014) Levels

The increase in the number of households projected for the next twenty years would be 4,670 at 1.5 percent growth and 5,681 at 2.5 percent growth under both action alternatives. Although the market assessment projected a demand for 500 to 800 or more housing units through 2035, this was a conservative estimate. If the subarea supported 25 percent of the city's forecasted housing growth, the projection would be 1,450 housing units by 2035. There is also the potential that housing growth could occur more rapidly than projected given Seattle population growth in recent years and improving market conditions. Zoning that provides more capacity for growth than projected provides flexibility to respond to market characteristics and homeowner preferences in the subarea.

## Projected and Capital Improvements to Support the First Twenty Years of Implementation

Since the potential impacts under any of the alternatives over the first twenty years would be similar, capital improvement recommendations are generally consistent across all alternatives for the twenty-year planning horizon. The 145<sup>th</sup> Street Station Subarea Plan will include a list of specific capital improvement projects needed to support the first twenty years of implementation.

## Market Trends and Demand for Housing and Mixed Use



A market assessment prepared by Leland Consulting Group for the 145<sup>th</sup> Street Station Subarea identified potential transit-oriented development opportunities for the next twenty years.

The market assessment predicts an increased demand in multifamily and various types of housing as Shoreline continues to attract residents of varying income levels. While the market assessment identified a potential demand for approximately 500 to 800 residential units or more through 2035, additional demand for housing could occur during the next twenty years depending on changes in the market, opportunities provided elsewhere, property owners' willingness to redevelop or sell their properties for redevelopment, and other factors. Certainly, the demand for housing would continue beyond twenty years, and may grow higher depending on these factors. For more information about the findings of the assessment, refer to Section 3.1 in Chapter 3 of this DEIS.

The Urban Land Institute (ULI), a national professional organization for developers, real estate investors and land use professionals researches and tracks trends in redevelopment across the nation. In a 2014 forecast of "development prospects," ULI ranked infill housing and urban mixed use redevelopment as the two highest prospects. Retiring baby boom generation and the emerging generation of home buyers and renters (also known as the Millennials or Generation Y) are creating a higher demand for urban infill housing and mixed use. Based on recent studies by ULI and others, both of these types of consumers are seeking active neighborhoods and in many cases are looking for more compact, connected urban lifestyles.

While urban central cities are projected to do well in the coming years based on this demand, places that mix the best of suburban and compact, mixed use qualities may be most desirable. In a recent national survey "American in 2013: Focus on Housing and Community" ULI found that among all adults polled (including Baby Boomers and Millennials/Gen Y-ers), the quality of public schools, parks and recreation opportunities, walkability, and short distance to work or school all ranked as important or very important. Shoreline's reputation as a livable community, with good schools, parks, trails, and other amenities, will continue to attract residents in the coming decades.

For more information on market analysis and trends refer to the report prepared by Leland Consulting Group, available at: <u>http://www.cityofshoreline.com/home/showdocument?id=17855</u>. The market assessment completed for the 185<sup>th</sup> Street Station Subarea by BAE Urban Economics is available at: <u>http://www.cityofshoreline.com/Home/ShowDocument?id=15704</u>.

#### Anticipated Growth and Change under Alternative 1-No Action

The DEIS assumed population growth for Alternative 1—No Action consistent with the City's Transportation Master Plan dispersed growth scenario through 2030, adding .05 percent growth through the planning horizon year of 2035. By 2035, the estimated population for the subarea under Alternative 1—No Action would be 11,040 people, compared to the current population of 8,321, adding 2,719 people over the next twenty years.



As analyzed in Section 3.1 of this DEIS, *"No Action" does not translate to "No Change" in the subarea.* With the implementation of light rail, there would be greater demand for land uses in proximity to the station, particularly for housing. The current zoning for much of the subarea is R-6 (with the exception of areas in the vicinity of NE 145<sup>th</sup> Street and 15<sup>th</sup> Avenue NE, NE 165<sup>th</sup> Street and 5<sup>th</sup> Avenue NE, and Aurora Avenue N). North City district on the east side of the subarea currently allows a mix of commercial uses and multifamily residential.

The R-6 zoning covers most of the existing subarea, with other commercial zones in the locations described above. R-6 allows six units per acre and the commercial zones allow greater densities. The current average number of units per acre in the subarea is 3.2. As such a substantial number of new housing units could be constructed over time in the subarea under the current zoning. Attached single family homes (such as duplexes, triplexes, and townhouses) and accessory dwelling units (attached or detached, maximum one per lot) are allowed in the R-6 zone if proposed redevelopment meets certain criteria (refer to Shoreline Municipal Code 20.40.510). The current maximum height for buildings in the R-6 zone is 35 feet.

Much of the housing stock in the subarea is reaching an age of 50 to 60 years or more, and some residents will likely make substantial renovations to their homes or demolish existing homes to build new ones. Based on this trend and the anticipated demand for more housing that will occur with light rail, as homesites are redeveloped in the subarea in the future under Alternative 1—No Action, the community could expect to see either larger and taller single family homes or combinations of various types of attached multiple-unit residential buildings and accessory dwelling units. Any of the residential buildings, including accessory dwelling units, could be constructed to a maximum height of 35 feet (approximately 3 to 3.5 stories). For comparative purposes, throughout north Seattle, there has been significant construction of this type over the last twenty years, which has changed the character of single family neighborhoods. These larger, newer homes would also likely be more expensive, limiting the number available for purchase by moderate-income households.

It is also important to note that redevelopment under Alternative 1—No Action would not be consistent with the adopted vision for the light rail station area as a vibrant, equitable transit-oriented district. Single family redevelopment under the No Action Alternative would provide fewer opportunities for new housing and new redevelopment improvements to streets and public spaces than proposed under Alternative 2 or 3, including the green network envisioned by workshop participants. Under Alternative 1, there would be a significantly lower overall quantity of various types of housing to fit diverse income levels, and substantially less mixed use/neighborhood commercial at street level. Increased housing choice and affordability will be needed to serve the growing demand in the subarea over the long term. Population, housing, and employment projections are depicted on the following pages.

## 2.3.2 Comparison of Land Uses under the Alternatives



Land use, zoning, urban form, and comprehensive plan comparisons of the alternatives are briefly summarized below. For more information, refer to Section 3.1 of this DEIS.

#### Land Use, Urban Form, and Zoning

Under the action alternatives (Alternative 2—Connecting Corridors and Alternative 3—Compact Community), transit-oriented redevelopment consisting of a mix of residential, retail/commercial, office, and public uses would be allowed under the new zoning categories. These proposed changes would broaden the types of housing choices available to fit a variety of income levels, including affordable housing. Land use changes are most expansive geographically under Alternative 2 than under Alternative 3. Land uses under Alternative 1—No Action would remain consistent with those allowed under existing zoning; however, as discussed above, density would be expected to increase over time.

Alternative 3 would provide more housing opportunities than Alternative 2 (15,270 total households in the subarea vs. 14,435). Alternative 2 would provide the most employment/commercial opportunities than Alternative 3 (11,747 total jobs in the subarea vs. 9,639).

Under Alternative 1—No Action, existing single family land uses zoned primarily R-6 (residential, 6 units per acre) would remain. Residents would be allowed to develop accessory dwelling units and attached single family units (such as duplexes), which would increase density in the subarea from the current overall average of 3.2 units per acre to closer to the 6 units per acre that is allowed by the current R-6 zoning. However, these density levels are not optimal for supporting high-capacity transit or the range of housing choices and affordability levels desired for the subarea.

The proposed Mixed Use Residential (MUR) zoning categories would allow various types of mixed use and transit-oriented development with housing over active uses at the ground floor level. Refer to Chapter 3.1 for a description of Mixed Use Residential designations. Four zoning categories are proposed for the subarea under the action alternatives:

- MUR-85'—Mixed Use Residential with 85' height (see description of potential exception below). This designation is only analyzed in Alternative 3.
- MUR-65'—Mixed Use Residential with 65' height (see description of potential exception below). This designation is only analyzed in Alternative 2.
- MUR-45'—Mixed Use Residential with 45' height limit (applicable in both Alternatives 2 and 3).
- MUR-35'—Mixed Use Residential with 35' height limit (applicable in both Alternatives 2 and 3).



The MUR zoning encourages mixed use buildings that have active ground floors with retail, and other uses that promote pedestrian traffic and sustain street level interest are envisioned for along key streets in the subarea. The uses in these buildings above the ground floor level would be predominantly residential, but in some locations also could be office/employment. MUR zoning optimizes Transit-Oriented Development (TOD) potential and is consistent with building code requirements and common construction approaches in TOD throughout the region and the US.

Under Alternative 2, building height in the subarea would be 65 feet under the proposed zoning category of MUR-65'. This is approximately six building levels.

Under Alternative 3, building height in the subarea would be 85 feet under the proposed zoning category of MUR-85'. This is approximately seven building levels. Due to construction types currently allowed by building code of wood frame over two-levels of concrete podium this would be the maximum height built applying the base zoning. This is often called a 5/2 or 5 over 2 construction style.

For both of the action alternatives (Alternative 2 and 3), the City is proposing the use of development agreements that would allow increases in height and density to redevelopment projects with the approval of an agreement under which the projects provide various elements and amenities—such as affordable housing, green building, structured parking, and inclusion of other options.

Development agreements would only potentially be applicable in the MUR-85' or MUR-65' zones and not in MUR-45' or MUR-35'. A development agreement would be a negotiated and public process, with the goal of including amenities desired by the community in exchange for additional development potential that could off-set the cost of providing such amenities.

The analysis in this DEIS assumes that up to 25 percent of the redevelopment projects may exceed the base height of 65 feet in the MUR-65' zone in Alternative 2 or 85 feet in the MUR-85' zone under Alternative 3 through development agreement provisions. The maximum height limit assumed in the analysis and draft regulations for the 145<sup>th</sup> Street Station Subarea is 140 feet, based on an understanding of the financial feasibility of redevelopment with the next likely viable building height option after 5 over 2, with steel frame construction, being 13 to 14 levels in height.

Given current market conditions and parcel sizes in the subarea, it is anticipated that it could take decades for mid-rise building construction of this height (13 to 14 stories) to be implemented, and even then it would be on a limited basis for only those projects that choose to pursue a development agreement process. The assumption of 25 percent of the area building to this capacity is probably over-estimated, but analyzing this level of development helps the City understand potential impacts of this possibility. In a future scenario where



25 percent of the MUR-85' or MUR-65' zones reached this level of development, additional environmental analysis would be required before any consideration of new development agreements.

The City is also evaluating how updates in regulations can support more conversion of single family homes to professional office uses, and neighborhood supporting businesses such as small shops and cafes, hair salons and barber shops, art studios, and other uses along key streets as the subarea transitions over time.

Given that there are sometimes challenges in leasing out active ground floor spaces before residential uses have fully built-out in some transit-oriented districts, the City would allow developers flexibility to lease ground floor for other purposes than active retail, including residential use, as long as the ground level is built to commercial standards that will allow active use in the long-term.

There are several places of the subarea where the existing zoning (primarily R-6, with some R-8, R-12, R-18 and NB-Neighborhood Business) would remain in place under the action alternatives. Under Alternative 3, more areas would remain in existing zoning than under Alternative 2. The R-48, R-24, R-18, NB, and CB (Community Business) zones are existing designations in the Development Code.

Height limits in areas where existing zoning is retained are as follows:

- R-6 35 feet
- R-8 35 feet
- R-12 35 feet
- R-18 40 feet
- R-24 40 feet
- NB 50 feet
- CB 60 feet
- MB 60 feet

# 2.3.3 Growth Forecasting and Planning Using Traffic Analysis Zones

The City of Shoreline is forecasted to grow in the coming years. Growth forecasts and targets for Shoreline and the subarea are discussed in Chapter 3, Section 3.2 Population, Housing, and Employment.

While the subarea plan is focused on the study areas shown in **Figure 1-1** in Chapter 1 of the DEIS, for purposes of population and employment projection calculations the limits of Traffic Analysis Zones (TAZ) boundaries are assumed as the study area.



TAZs are commonly used for analyzing population and demographics regionally in planning because the TAZ boundaries correlate to census tract boundaries. In some cases, the TAZ boundaries extend beyond the land use and mobility study area boundaries designated for the subarea. TAZs related to the subarea are depicted in **Figure 2-1** in this chapter of the DEIS

## 2.3.4 Redevelopment Potential and Planning for the First Twenty Years of Growth

It is anticipated that growth and redevelopment in the subarea will happen slowly and gradually, over many decades. There are many challenges that will influence the pace of growth and change, including market forces, property owners' interest in redeveloping or selling their properties, parcel size and configuration, the length of time until light rail is operating, and other factors.

Likely, future growth under either of the action alternatives would occur first on larger sites or aggregated parcels in the subarea that are readily available for redevelopment based on property owners' interest in selling. Since most of the parcel sizes in the subarea are single family lots, multiple property owners would need to coordinate to aggregate their properties into larger parcels for redevelopment. This would take time, and as such it is anticipated that the projected growth would happen very gradually, over decades, as indicated previously.

With adoption of the Planned Action Ordinance, a twenty-year planning horizon (to the year 2035), common for comprehensive planning and subarea planning, will be established. Twenty-year growth targets will be set for the planned action area and a list of capital improvement projects will be identified to support that level of growth in the subarea. The City will monitor the ongoing pace of growth and change over the next twenty years in the subarea. In the future, if growth trends indicate that the twenty-year growth target will be exceeded and/or capital improvement projects do not keep pace with expected growth, the City would revisit the subarea plan through its typical long range planning efforts (comprehensive planning). This process may require development of a supplemental environmental impact statement to support projected growth changes in the subarea or other modifications to ensure growth is managed in accordance with the GMA.

## 2.3.5 Potential Future Alternatives

The Planning Commission and City Council will consider public comments on the DEIS and recommend a preferred alternative to become the planned action of the subarea plan. This preferred alternative will be identified in the FEIS. It is anticipated that the preferred alternative will be one or the other of the two proposed action alternatives with only minor changes made in the land uses proposed to ensure consistency with the analysis in this DEIS. Any changes to this future preferred alternative/planned action will be highlighted in the FEIS.



As stated above, the City intends to monitor growth and change in the subarea in the coming years and at some point in the future may decide to revisit the subarea plan to make amendments in line with future conditions. This may involve adjustment of the proposed plan within the range of alternatives studied in the DEIS and FEIS. It also may involve future development of adopting a new alternative, which may or may not require a supplemental level of environmental analysis (Supplemental EIS) to support its adoption.

# 2.4 Environmental Review

## 2.4.1 Purpose

The purpose of environmental review is to provide decision makers and citizens with information about the potential environmental consequences of proposed actions, such as plans, policies, regulations, and permits. SEPA requires that governments consider environmental effects of proposals before taking an action. An EIS provides the greatest amount of information about potential environmental impacts and offers mitigation measures to reduce these impacts. The City's past and current environmental review process is described below.

## 2.4.2 Prior Environmental Review

Prior environmental review was conducted in the following EISs, including the City's Comprehensive Plan and subsequent amendments:

- Lynnwood Link Extension Draft Environmental Impact Statement by Sound Transit, July 2013
- *City of Shoreline Comprehensive Plan* update, adopted by Ordinance 649 on December 10, 2012
- City of Shoreline Ridgecrest Subarea Plan, May 24, 2010
- Aurora Square Community Renewal Area Planned Action Draft Environmental Impact Statement, December 2014

Where appropriate, relevant information found in prior environmental and planning documents is referenced and considered in this DEIS.

# 2.4.3 Current Environmental Review

Pursuant to SEPA Rules (WAC 197-11-408 through 410), the City issued a Determination of Significance and Scoping Notice (see Appendix), on October 1, 2014. Public and agency comments were solicited in a 31-day scoping period from October 1, 2014 to October 31,



2014. During this period, the general public, as well as public agencies and stakeholders, were invited to submit written comments on the scope of the EIS and offer written suggestions.

Consistent with City noticing requirements, the notice was published in the City's newspaper of record and mailed to property owners inside the subarea and within 300 feet. It was also sent to federal and state agencies to which the City sends SEPA notices and determinations. As a courtesy, it was posted on the City's website.

As described in the Scoping Notice, the following topics are addressed in Chapter 3 of this DEIS:

- Land Use Patterns/Plans and Policies
- Population, Housing, and Employment
- Transportation
- Streams, Wetlands, and Surface Water Management (including Water Quality and Water Quantity)
- Parks, Recreation, and Open Space (Including Wildlife Habitat Areas, Trees, etc.)
- Schools, Fire, Police, and Other Public Services
- Utilities

Public and stakeholder input received indicated concurrence with these elements of the environment as the focus for the DEIS.

# 2.5 Planning and Policy Background

Background planning regulations and provisions are summarized below, including the Washington State Growth Management Act, Puget Sound Region Vision 2040 and the Growing Transit Communities Partnership, Countywide Planning Policies, and the City of Shoreline Vision 2029, Comprehensive Plan, and other relevant City planning policies and development regulations.

## 2.5.1 Federal Partnership for Sustainable Communities

In 2009, the United States Department of Housing and Urban Development (HUD), the Department of Transportation (DOT), and the Environmental Protection Agency (EPA) formed an interagency partnership to coordinate investments and align policies to support communities that want to give Americans more housing choices, make transportation systems more efficient and reliable, reinforce existing investments, and support vibrant and healthy neighborhoods that attract businesses. Each agency is working to incorporate the principles into its funding programs, policies, and future legislative proposals, and consequently, each agency now has adopted policies to support sustainable community development.



This Partnership for Sustainable Communities marked a fundamental shift in the way the federal government structures its transportation, housing, and environmental spending, policies, and programs. The three agencies agreed to collaborate to help communities become economically strong and environmentally sustainable. The Partnership recognizes that rebuilding national prosperity today and for the long run starts with individual communities where—now and generations from now—all Americans can find good jobs, good homes, and a good life.

Coordinating federal investments in infrastructure, facilities, and services meets multiple economic, environmental, and community objectives with each dollar spent. For example, investing in public transit can lower transportation costs, reduce greenhouse gas emissions and other air pollution, decrease traffic congestion, encourage healthy walking and bicycling, and spur development of new homes and amenities around transit stations. The Partnership is guided by six Livability Principles shown in the box on page 2-15.



January 2015

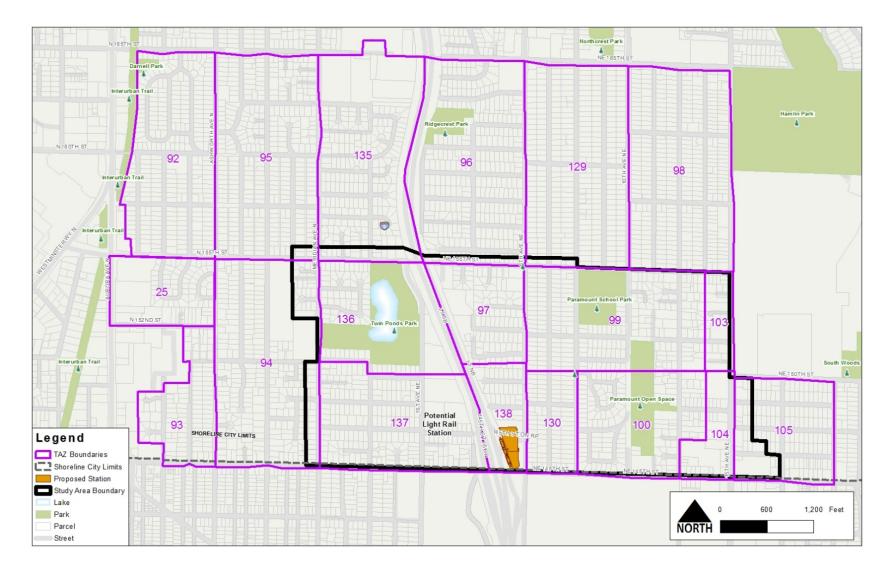


Figure 2.1 Traffic Analysis Zones in the Vicinity of the Subarea (Purple Boundary Lines) and Land Use Study Area (Black)

# 2.5.2 Washington State Growth Management Act

The Washington State Growth Management Act (GMA) identifies a comprehensive framework for managing growth and development within local jurisdictions. The City of Shoreline is required to plan in accordance with GMA. Comprehensive plans for cities planning under GMA must include the following elements: land use (including a future land use map), housing, transportation, public facilities, parks and recreation, economic development, and utilities. Additional elements such as subarea plans may be added at the option of the local jurisdiction. A GMA comprehensive plan must provide for adequate capacity to accommodate the city's share of projected regional growth. It must also ensure that planned and financed infrastructure can support planned growth at a locally acceptable level of service. Development regulations are required to be consistent with and implement the comprehensive plan.

The GMA established fourteen statutory goals that guide the development of comprehensive plans, and for a plan to be valid, it must be consistent with these:

- Guide urban growth to areas where urban services can be adequately provided;
- 2. Reduce urban sprawl;
- 3. Encourage efficient multimodal transportation systems;
- 4. Encourage the availability of affordable housing to all economic segments of the population;
- 5. Encourage economic development throughout the state;
- 6. Assure private property is not taken for public use without just compensation;

## Partnership for Sustainable Communities Guiding Livability Principles

- Provide more transportation choices. Develop safe, reliable, and economical transportation choices to decrease household transportation costs, reduce our nation's dependence on foreign oil, improve air quality, reduce greenhouse gas emissions, and promote public health.
- Promote equitable, affordable housing. Expand location- and energy-efficient housing choices for people of all ages, incomes, races, and ethnicities to increase mobility and lower the combined cost of housing and transportation.
- Enhance economic competitiveness. Improve economic competitiveness through reliable and timely access to employment centers, educational opportunities, services and other basic needs by workers, as well as expanded business access to markets.
- Support existing communities. Target federal funding toward existing communities—through strategies like transit-oriented, mixed-use development and land recycling—to increase community revitalization and the efficiency of public works investments and safeguard rural landscapes.
- Coordinate and leverage federal policies and investment. Align federal policies and funding to remove barriers to collaboration, leverage funding, and increase the accountability and effectiveness of all levels of government to plan for future growth, including making smart energy choices such as locally generated renewable energy.
- Value communities and neighborhoods. Enhance the unique characteristics of all communities by investing in healthy, safe, and walkable neighborhoods—rural, urban, or suburban.



- 7. Encourage predictable and timely permit processing;
- 8. Maintain and enhance natural resource-based industries;
- 9. Encourage retention of open space and development of recreational opportunities;
- 10. Protect the environment and enhance the state's quality of life;
- Encourage the participation of citizens in the planning process;
- 12. Ensure adequate public facilities and services necessary to support development;
- 13. Identify and preserve lands and sites of historic and archaeological significance; and
- 14. Manage shorelines of statewide significance.

# 2.5.3 Puget Sound Region Vision 2040 and Growing Transit Communities Partnership

The proposed 145<sup>th</sup> Street Station Subarea Plan is consistent with the regional long-range plan, Vision 2040, as well as land use and transportation planning initiatives to support the region's investment in high-capacity transit, as described further below.

## Vision 2040

Vision 2040 is an integrated, long-range vision for maintaining a healthy region and promoting the well-being of people and communities, economic vitality, and a healthy environment for the central Puget Sound region. It contains an environmental framework, a numeric regional growth strategy, policy sections guided by overarching goals, implementation actions, and measures to monitor progress.

The following overarching goals provide the framework for each of the six major policy sections of VISION 2040.

- Environment—The region will care for the natural environment by protecting and restoring natural systems, conserving habitat, improving water quality, reducing greenhouse gas emissions and air pollutants, and addressing potential climate change impacts. The region acknowledges that the health of all residents is connected to the health of the environment. Planning at all levels should consider the impacts of land use, development patterns, and transportation on the ecosystem.
- **Development Patterns**—The region will focus growth within already urbanized areas to create walkable, compact, and transit-oriented communities that maintain unique local character. Centers will continue to be a focus of development. Rural and natural resource lands will continue to be permanent and vital parts of the region.
- Housing—The region will preserve, improve, and expand its housing stock to provide a range of affordable, healthy, and safe housing choices to every resident. The region will continue to promote fair and equal access to housing for all people.
- Economy—The region will have a prospering and sustainable regional economy by supporting businesses

and job creation, investing in all people, sustaining environmental quality, and creating great central places, diverse communities, and high quality of life.

- **Transportation**—The region will have a safe, cleaner, integrated, sustainable, and highly efficient multimodal transportation system that supports the regional growth strategy, promotes economic and environmental vitality, and contributes to better public health.
- Public Services—The region will support development with adequate public facilities and services in a coordinated, efficient, and cost-effective manner that supports local and regional growth planning objectives.

Vision 2040 includes multi-county policies to support each of these major policy sections. These policies serve as foundational guidance for countywide planning policies in King County and also for comprehensive planning and subarea planning in Shoreline.

## Growing Transit Communities Partnership

In recognition of the \$25 billion investment the central Puget Sound region is making in voter approved regional rapid transit, the Growing Transit Communities Partnership is designed to help make the most of this investment by locating housing, jobs, and services close enough to transit so that more people will have a faster and more convenient way to travel. The Partnership developed a comprehensive set of Corridor Action Strategies, as well as other tools to support development of jobs and housing in areas associated with transit investments. For more information visit: http://www.psrc.org/growth/growing-transitcommunities/growing-communities-strategy/ The Partnership also worked with the Center for Transit-Oriented Development to create a People + Place Typology for the region's 74 high-capacity transit station areas. The 145<sup>th</sup> Street Station Subarea in Shoreline was designated with the typology "Protect and Grow."

According to PSRC's *Transit Community Typology Implementation Approaches*, "Protect and Grow" transit communities are neighborhoods with emerging to strong real estate demand and community characteristics that indicate the need to carefully transition land uses over time. Priority strategies focus on supporting an emerging market for higher density development while preserving affordability and leveraging community benefits from growth. As communities in transition, they call for a more proactive approach to ensuring equitable growth. Priority strategies include:

- Development of regulations and capital facilities investments that support market demand;
- Implementing a full range of tools for new and preserved affordable housing;
- Conducting community needs assessments and targeted community investments; and
- Targeted support to small businesses (existing and potential new businesses).

The *145<sup>th</sup> Street Station Subarea Plan* will carry these strategies forward.



## 2.5.4 Countywide Planning Policies

As part of the comprehensive planning process, King County and its cities have developed countywide planning policies. These policies were designed to help the 39 cities and the County address growth management in a coordinated manner. The policies were adopted by King County Council, and subsequently ratified by cities, including the City of Shoreline, in 2013.

Taken together the countywide planning policies address issues related to growth, economics, land use, and the environment. Specific objectives include:

- Implementation of Urban Growth Areas;
- Promotion of contiguous and orderly development;
- Siting of public capital facilities;
- Creating affordable housing plans and criteria; and
- Ensuring favorable employment and economic conditions in the County.

The countywide planning policies also set growth targets for cities. Refer to Section 3.2 for the growth targets established for Shoreline. As a precursor to the countywide planning policies, the vision and framework for King County 2030 call for vibrant, diverse and compact urban communities, stating that:

"Within the Urban Growth Area little undeveloped land now exists and urban infrastructure has been extended to fully serve the entire Urban Growth Area. Development activity is focused on redevelopment to create vibrant neighborhoods where residents can walk, bicycle or use public transit for most of their needs." Other provisions and policies relevant to the station subarea plan include the following.

#### Environment

- **EN-2** Encourage low impact development approaches for managing stormwater, protecting water quality, minimizing flooding and erosion, protecting habitat, and reducing greenhouse gas emissions.
- **EN-16** Plan for land use patterns and transportation systems that minimize air pollution and greenhouse gas emissions, including:
  - Maintaining or exceeding existing standards for carbon monoxide, ozone, and particulates;
  - Directing growth to Urban Centers and other mixed use/ high density locations that support mass transit, encourage non-motorized modes of travel and reduce trip lengths;
  - Facilitating modes of travel other than single occupancy vehicles including transit, walking, bicycling, and carpooling;
  - Incorporating energy-saving strategies in infrastructure planning and design;
  - Encouraging new development to use low emission construction practices, low or zero net lifetime energy requirements and "green" building techniques; and
  - Increasing the use of low emission vehicles, such as efficient electric-powered vehicles.

- **EN-19** Promote energy efficiency, conservation methods and sustainable energy sources to support climate change reduction goals.
- **EN-20** Plan and implement land use, transportation, and building practices that will greatly reduce consumption of fossil fuels.

#### **Development Patterns**

- **DP-2** Promote a pattern of compact development within the Urban Growth Area that includes housing at a range of urban densities, commercial and industrial development, and other urban facilities, including medical, governmental, institutional, and educational uses and parks and open space. The Urban Growth Area will include a mix of uses that are convenient to and support public transportation in order to reduce reliance on single occupancy vehicle travel for most daily activities.
- **DP-3** Efficiently develop and use residential, commercial, and manufacturing land in the Urban Growth Area to create healthy and vibrant urban communities with a full range of urban services, and to protect the long-term viability of the Rural Area and Resource Lands. Promote the efficient use of land within the Urban Growth Area by using methods such as:
  - Directing concentrations of housing and employment growth to designated centers;
  - Encouraging compact development with a mix of compatible residential, commercial, and community activities;

- Maximizing the use of the existing capacity for housing and employment; and
- Coordinating plans for land use, transportation, capital facilities and services.
- **DP-4** Concentrate housing and employment growth within the designated Urban Growth Area. Focus housing growth within countywide designated Urban Centers and locally designated local centers. Focus employment growth within countywide designated Urban and Manufacturing/Industrial Centers and within locally designated local centers.
- **DP-5** Decrease greenhouse gas emissions through land use strategies that promote a mix of housing, employment, and services at densities sufficient to promote walking, bicycling, transit, and other alternatives to auto travel.
- **DP-6** Plan for development patterns that promote public health by providing all residents with opportunities for safe and convenient daily physical activity, social connectivity, and protection from exposure to harmful substances and environments.
- **DP-7** Plan for development patterns that promote safe and healthy routes to and from public schools.
- **DP-13** All jurisdictions shall plan to accommodate housing and employment targets.
- **DP-39** Develop neighborhood planning and design processes that encourage infill development, redevelopment, and reuse



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of existing buildings and that, where appropriate based on local plans, enhance the existing community character and mix of uses.

- DP-40 Promote a high quality of design and site planning in publicly-funded and private development throughout the Urban Growth Area.
- **DP-42** Design new development to create and protect systems of green infrastructure, such as urban forests, parks, green roofs, and natural drainage systems, in order to reduce climate altering pollution and increase resilience of communities to climate change impacts.
- **DP-43** Design communities, neighborhoods, and individual developments using techniques that reduce heat absorption, particularly in Urban Centers.
- **DP-44** Adopt design standards or guidelines that foster infill development that is compatible with the existing or desired urban character.

#### Housing

H-1 Address the countywide need for housing affordable to households with moderate, low and very-low incomes, including those with special needs. The countywide need for housing by percentage of Area Median Income (AMI) is:

- 50-80 percent of AMI (moderate) 16 percent of total housing supply
- 30-50 percent of AMI (low) 12 percent of total housing supply
- 30 percent and below AMI (very-low) 12 percent of total housing supply
- H-2 Address the need for housing affordable to households at less than 30 percent AMI (very low income), recognizing that this is where the greatest need exists, and addressing this need will require funding, policies and collaborative actions by all jurisdictions working individually and collectively.
- H-4 Provide zoning capacity within each jurisdiction in the Urban Growth Area for a range of housing types and densities, sufficient to accommodate each jurisdiction's overall housing targets and, where applicable, housing growth targets in designated Urban Centers.
- H-9 Plan for housing that is accessible to major employment centers and affordable to the workforce in them so people of all incomes can live near or within reasonable commuting distance of their places of work. Encourage housing production at a level that improves the balance of housing to employment throughout the county.
- **H-10** Promote housing affordability in coordination with transit, bicycle, and pedestrian plans and investments and in

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proximity to transit hubs and corridors, such as through transit oriented development and planning for mixed uses in transit station areas.

- H-12 Plan for residential neighborhoods that protect and promote the health and well-being of residents by supporting active living and healthy eating and by reducing exposure to harmful environments.
- H-13 Promote fair housing and plan for communities that include residents with a range of abilities, ages, races, incomes, and other diverse characteristics of the population of the county.

#### Economy

- **EC-2** Support economic growth that accommodates employment growth targets through local land use plans, infrastructure development, and implementation of economic development strategies.
- **EC-5** Help businesses thrive through:
  - Transparency, efficiency, and predictability of local regulations and policies;
  - Communication and partnerships between businesses, government, schools, and research institutions; and
  - Government contracts with local businesses.
- EC-7 Promote an economic climate that is supportive of business formation, expansion, and retention and emphasizes the importance of small businesses in creating jobs.

- **EC-9** Identify and support the retention of key regional and local assets to the economy, such as major educational facilities, research institutions, health care facilities, manufacturing facilities, and port facilities.
- **EC-12** Celebrate the cultural diversity of local communities as a means to enhance the county's global relationships.
- **EC-13** Address the historic disparity in income and employment opportunities for economically disadvantaged populations, including minorities and women, by committing resources to human services; community development; housing; economic development; and public infrastructure.
- **EC-15** Make local investments to maintain and expand infrastructure and services that support local and regional economic development strategies. Focus investment where it encourages growth in designated centers and helps achieve employment targets.
- **EC-16** Add to the vibrancy and sustainability of our communities and the health and well-being of all people through safe and convenient access to local services, neighborhood-oriented retail, purveyors of healthy food (e.g. grocery stores and farmers markets), and transportation choices.

## Transportation

T-3 Increase the share of trips made countywide by modes other than driving alone through coordinated land use planning, public and private investment, and programs

focused on centers and connecting corridors, consistent with locally adopted mode split goals.

- T-4 Develop station area plans for high-capacity transit stations and transit hubs. Plans should reflect the unique characteristics and local vision for each station area including transit supportive land uses, transit rights-of-way, stations and related facilities, multi-modal linkages, and place-making elements.
- **T-6** Foster transit ridership by designing transit facilities and services as well as non-motorized infrastructure so that they are integrated with public spaces and private developments to create an inviting public realm.
- **T-12** Address the needs of non-driving populations in the development and management of local and regional transportation systems.
- T-15 Design and operate transportation facilities in a manner that is compatible with and integrated into the natural and built environments in which they are located. Incorporate features such as natural drainage, native plantings, and local design themes that facilitate integration and compatibility.
- T-19 Design roads and streets, including retrofit projects, to accommodate a range of motorized and non-motorized travel modes in order to reduce injuries and fatalities and to encourage non-motorized travel. The design should include well-defined, safe and appealing spaces for pedestrians and bicyclists.

- **T-20** Develop a transportation system that minimizes negative impacts to human health, including exposure to environmental toxins generated by vehicle emissions.
- **T-21** Provide opportunities for an active, healthy lifestyle by integrating the needs of pedestrians and bicyclists in the local and regional transportation plans and systems.
- **T-22** Plan and develop a countywide transportation system that reduces greenhouse gas emissions by advancing strategies that shorten trip length or replace vehicle trips to decrease vehicle miles traveled.
- **T-23** Apply technologies, programs and other strategies that optimize the use of existing infrastructure in order to improve mobility, reduce congestion, increase energy-efficiency, and reduce the need for new infrastructure.

## **Public Facilities and Services**

Policies under Public Facilities and Services emphasize the Growth Management Act's requirement that jurisdictions determine which facilities are necessary to serve the desired growth pattern and how they will be financed, in order to ensure timely provision of adequate services and facilities. This is a focus of the station subarea plan, supported by the analysis in this DEIS. The Public Facilities and Services section also encourages:

- Collaboration among jurisdictions;
- Conservation and efficient use of water resources;



- Provision of public sanitary sewer service or alternative high performance technologies (such as reusable waste water systems);
- Reduction of the solid waste stream, and reuse and recycling;
- Reduced energy consumption through efficiency and conservation as a means to lower energy costs and mitigate environmental impacts associated with traditional energy supplies and the use of renewable and alternative energy resources to help meet the County's long-term energy needs;
- Provision of telecommunication infrastructure to serve growth and development in a manner consistent with the regional and countywide vision; and
- Provision of human and community services to meet the needs of current and future residents in King County communities through coordinated planning, funding, and delivery of services by the county, cities, and other agencies.

# 2.5.5 City of Shoreline Vision 2029

In fall 2008, the City of Shoreline began working with the community to create a vision for the next twenty years to help maintain Shoreline's quality of life. The process engaged hundreds of citizens and stakeholders through a series of "Community Conversations" hosted by neighborhood associations and community groups, as well as Town Hall meetings hosted by the City Council. The process generated over 2,500 comments, which the City synthesized into a vision statement and eighteen framework goals. These were subsequently adopted by the City Council in May 2009. The vision and framework goals are presented below.

#### Vision 2029

Shoreline in 2029 is a thriving, friendly city where people of all ages, cultures, and economic backgrounds love to live, work, play and, most of all, call home. Whether you are a first-time visitor or long-term resident, you enjoy spending time here. There always seems to be plenty to do in Shoreline – going to a concert in a park, exploring a Puget Sound beach or dense forest, walking or biking miles of trails and sidewalks throughout the city, shopping at local businesses or the farmer's market, meeting friends for a movie and meal, attending a street festival, or simply enjoying time with your family in one of the city's many unique neighborhoods.

People are first drawn here by the city's beautiful natural setting and abundant trees; affordable, diverse and attractive housing; award-winning schools; safe, walkable neighborhoods; plentiful parks and recreation opportunities; the value placed on arts, culture, and history; convenient shopping, as well as proximity to Seattle and all that the Puget Sound region has to offer.

The city's real strengths lie in the diversity, talents and character of its people. Shoreline is culturally and economically diverse, and draws on that variety as a source of social and economic strength. The city works hard to ensure that there are opportunities to live, work and play in Shoreline for people from all backgrounds.

Shoreline is a regional and national leader for living sustainably. Everywhere you look there are examples of sustainable, low impact, climate-friendly practices come to life – cutting edge



energy-efficient homes and businesses, vegetated roofs, rain gardens, bioswales along neighborhood streets, green buildings, solar-powered utilities, rainwater harvesting systems, and local food production to name only a few. Shoreline is also deeply committed to caring for its seashore, protecting and restoring its streams to bring back the salmon, and to making sure its children can enjoy the wonder of nature in their own neighborhoods.

A City of Neighborhoods—Shoreline is a city of neighborhoods, each with its own character and sense of place. Residents take pride in their neighborhoods, working together to retain and improve their distinct identities while embracing connections to the city as a whole. Shoreline's neighborhoods are attractive, friendly, safe places to live where residents of all ages, cultural backgrounds and incomes can enjoy a high quality of life and sense of community. The city offers a wide diversity of housing types and choices, meeting the needs of everyone from newcomers to long-term residents.

Newer development has accommodated changing times and both blends well with established neighborhood character and sets new standards for sustainable building, energy efficiency and environmental sensitivity. Residents can leave their car at home and walk or ride a bicycle safely and easily around their neighborhood or around the whole city on an extensive network of sidewalks and trails.

No matter where you live in Shoreline there's no shortage of convenient destinations and cultural activities. Schools, parks, libraries, restaurants, local shops and services, transit stops, and indoor and outdoor community gathering places are all easily accessible, attractive and well maintained. Getting around Shoreline and living in one of the city's many unique, thriving neighborhoods is easy, interesting and satisfying on all levels.

**Neighborhood Centers**—The city has several vibrant neighborhood "main streets" that feature a diverse array of shops, restaurants, and services. Many of the neighborhood businesses have their roots in Shoreline, established with the help of a local business incubator, a long-term collaboration between the Shoreline Community College, the Shoreline Chamber of Commerce, and the City.

Many different housing choices are seamlessly integrated within and around these commercial districts, providing a strong local customer base. Gathering places - like parks, plazas, cafes and wine bars - provide opportunities for neighbors to meet, mingle and swap the latest news of the day. Neighborhood main streets also serve as transportation hubs, whether you are a cyclist, pedestrian, or bus rider. Since many residents still work outside Shoreline, public transportation provides a quick connection to downtown, the University of Washington, light rail and other regional destinations.

You'll also find safe, well-maintained bicycle routes that connect all of the main streets to each other and to the Aurora core area, as well as convenient and reliable local bus service throughout the day and throughout the city. If you live nearby, sidewalks connect these hubs of activity to the surrounding neighborhood, bringing a car-free lifestyle within reach for many.

**The Signature Boulevard**—Aurora Avenue is Shoreline's grand boulevard. It is a thriving corridor, with a variety of shops,



businesses, eateries and entertainment, and includes clusters of some mid-rise buildings, well-designed and planned to transition to adjacent residential neighborhoods gracefully. Shoreline is recognized as a business-friendly city. Most services are available within the city, and there are many small businesses along Aurora, as well as larger employers that attract workers from throughout the region. Here and elsewhere, many Shoreline residents are able to find family-wage jobs within the city.

Housing in many of the mixed-use buildings along the boulevard is occupied by singles, couples, families, and seniors. Structures have been designed in ways that transition both visually and physically to reinforce the character of adjacent residential neighborhoods.

The improvements put in place in the early decades of the 21st century have made Aurora an attractive and energetic district that serves both local residents and people from nearby Seattle, as well as other communities in King and Snohomish counties. As a major transportation corridor, there is frequent regional rapid transit throughout the day and evening. Sidewalks provide easy access for walking to transit stops, businesses, and connections to adjacent neighborhoods.

Aurora has become a green boulevard, with mature trees and landscaping, public plazas, and green spaces. These spaces serve as gathering places for neighborhood and citywide events throughout the year. It has state-of-the-art stormwater treatment and other sustainable features along its entire length. As you walk down Aurora you experience a colorful mix of bustling hubs – with well designed buildings, shops and offices – big and small – inviting restaurants, and people enjoying their balconies and patios.

This district is characterized by compact, mixed-use, pedestrianfriendly development highlighted by the Shoreline City Hall, the Shoreline Historical Museum, Shorewood High School, and other civic facilities. The interurban park provides open space, recreational opportunities, and serves as the city's living room for major festivals and celebrations.

A Healthy Community—Shoreline residents, City government and leaders care deeply about a healthy community. The City's commitment to community health and welfare is reflected in the rich network of programs and organizations that provide human services throughout the city to address the needs of all its residents.

Shoreline is a safe and progressive place to live. It is known region wide for the effectiveness of its police force and for programs that encourage troubled people to pursue positive activities and provide alternative treatment for non-violent and non-habitual offenders.

**Better for the Next Generation**—In Shoreline it is believed that the best decisions are informed by the perspectives and talents of its residents. Community involvement in planning and opportunities for input are vital to shaping the future, particularly at the neighborhood scale, and its decision making processes reflect that belief. At the same time, elected leaders and City staff strive for efficiency, transparency and consistency to ensure an effective and responsive City government.



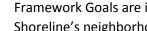
Shoreline continues to be known for its outstanding schools, parks and youth services. While children are the bridge to the future, the city also values the many seniors who are a bridge to its shared history, and redevelopment has been designed to preserve our historic sites and character. As the population ages and changes over time, the City continues to expand and improve senior services, housing choices, community gardens, and other amenities that make Shoreline such a desirable place to live.

Whether for a 5-year-old learning from volunteer naturalists about tides and sea stars at Richmond Beach or a 75-year-old learning yoga at the popular Senior Center, Shoreline is a place where people of all ages feel the city is somehow made for them. And, maybe most importantly, the people of Shoreline are committed to making the city even better for the next generation.

#### Framework Goals

The original framework goals for the city were developed through a series of more than 300 activities held in 1996-1998. They were updated through another series of community visioning meetings and open houses in 2008-2009. These Framework Goals provide the overall policy foundation for the Comprehensive Plan and support the City Council's vision. When implemented, the Framework Goals are intended to preserve the best gualities of Shoreline's neighborhoods today and protect the City's future. To achieve balance in the city's development the Framework Goals must be viewed as a whole and not one pursued to the exclusion of others. Shoreline is committed to being a sustainable city in all respects.

- FG 1: Continue to support exceptional schools and opportunities for lifelong learning.
- FG 2: Provide high quality public services, utilities, and infrastructure that accommodate anticipated levels of growth, protect public health and safety, and enhance the quality of life.
- FG 3: Support the provision of human services to meet community needs.
- FG 4: Provide a variety of gathering places, parks, and recreational opportunities for all ages and expand them to be consistent with population changes.
- FG 5: Encourage an emphasis on arts, culture and history throughout the community.
- FG 6: Make decisions that value Shoreline's social, economic, and cultural diversity.
- FG 7: Conserve and protect our environment and natural resources, and encourage restoration, environmental education and stewardship.
- FG 8: Apply innovative and environmentally sensitive development practices.
- FG 9: Promote quality building, functionality, and walkability through good design and development that is compatible with the surrounding area.





- **FG 10:** Respect neighborhood character and engage the community in decisions that affect them.
- **FG 11:** Make timely and transparent decisions that respect community input.
- **FG 12:** Support diverse and affordable housing choices that provide for Shoreline's population growth, including options accessible for the aging and/or developmentally disabled.
- **FG 13:** Encourage a variety of transportation options that provide better connectivity within Shoreline and throughout the region.
- **FG 14:** Designate specific areas for high density development, especially along major transportation corridors.
- **FG 15:** Create a business friendly environment that supports small and local businesses, attracts large businesses to serve the community and expand our jobs and tax base, and encourages innovation and creative partnerships.
- **FG 16:** Encourage local neighborhood retail and services distributed throughout the city.
- **FG 17:** Strengthen partnerships with schools, non-governmental organizations, volunteers, public agencies and the business community.

**FG 18:** Encourage Master Planning at Fircrest School that protects residents and encourages energy and design innovation for sustainable future development.

## 2.5.6 City of Shoreline Comprehensive Plan

The City of Shoreline adopted its current Comprehensive Plan by Ordinance 649 on December 10, 2012. As required under GMA, the City's current Comprehensive Plan and corresponding regulations were prepared and adopted to guide future development and fulfill the City's responsibilities. The Comprehensive Plan contains all required elements and many optional elements.

A comprehensive plan indicates how a community envisions its future, and sets forth strategies for achieving the desired vision. A comprehensive plan guides how a city will grow, identifies compatible land uses, a range of housing and employment choices, an efficient and functional transportation network, and adequate public facilities, and protects environmental and historic resources.

A comprehensive plan can be an effective management tool for a city, providing an opportunity for community-defined direction and greater predictability for property owners. Development regulations, which implement aspects of comprehensive plans, govern such factors as allowable uses, size and location of buildings and improvements, and standards for environmental protection.



#### **Elements Contained in the Current Comprehensive**

#### Plan

The City of Shoreline Comprehensive Plan includes the following elements:

- Land Use
- Community Design
- Housing
- Transportation
- Economic Development
- Natural Environment
- Parks, Recreation & Open Space
- Capital Facilities
- Utilities

## Existing Comprehensive Plan Land Use

#### Designations

The City of Shoreline Comprehensive Plan applies land use designations to all parcels within the city limits. Existing land use designations shown on the Comprehensive Plan map include:

- Low Density Residential
- Medium Density Residential
- High Density Residential
- Mixed Use 1
- Mixed Use 2
- Town Center District
- Public Facility
- Public Open Space
- Private Open Space
- Light Rail Station Areas:
  - Station Area 1\*



- Station Area 2\*
  - \* Boundaries were included as map features, but these were not formal land use designations defined by policy in the 2012 Comprehensive Plan

With adoption of the 145<sup>th</sup> Street Station Subarea Plan, the Comprehensive Plan land use designations will be amended to reflect the proposed zoning of the plan. Specifically, actual Light Rail Station Areas designations would be defined. This is described in more detail in Section 3.1 of this DEIS.

## Specific Policies Related to Light Rail Station Areas

As part of its 2012 Comprehensive Plan update, the City of Shoreline adopted specific policies related to light rail station areas that provide a guiding foundation for the subarea plan.

- **LU20:** Collaborate with regional transit providers to design transit stations and facilities that further the City's vision by employing superior design techniques, such as use of sustainable materials; inclusion of public amenities, open space, and art; and substantial landscaping and retention of significant trees.
- **LU21:** Work with Metro Transit, Sound Transit, and Community Transit to develop a transit service plan for the light rail stations. The plan should focus on connecting residents from all neighborhoods in Shoreline to the stations in a reliable, convenient, and efficient manner.
- **LU22:** Encourage regional transit providers to work closely with affected neighborhoods in the design of any light rail transit facilities.

- **LU23:** Work with neighborhood groups, business owners, regional transit providers, public entities, and other stakeholders to identify and fund additional improvements that can be efficiently constructed in conjunction with light rail and other transit facilities.
- **LU24:** Maintain and enhance the safety of Shoreline's streets when incorporating light rail, through the use of street design features, materials, street signage, and lane markings that provide clear, unambiguous direction to drivers, pedestrians, and bicyclists.
- **LU25:** Evaluate property within a ½ mile radius of a light rail station for multifamily residential choices (R-18 or greater) that support light rail transit service, non-residential uses, non-motorized transportation improvements, and traffic and parking mitigation.
- **LU26:** Evaluate property within a ¼ mile radius of a light rail station for multifamily residential housing choices (R-48 or greater) that support light rail transit service, non-residential uses, non-motorized transportation improvements, and traffic and parking mitigation.
- **LU27:** Evaluate property along transportation corridors that connects light rail stations and other commercial nodes in the city, including Town Center, North City, Fircrest, and Ridgecrest for multifamily, mixed-use, and non-residential uses.

- **LU28:** Implement a robust community involvement process that develops tools and plans to create vibrant, livable, and sustainable light rail station areas.
- LU29: Create and apply innovative methods and tools to address land use transitions in order to manage impacts on residents and businesses in a way that respects individual property rights. Develop mechanisms to provide timely information so residents can plan for and respond to changes.
- **LU30:** Encourage and solicit the input of stakeholders, including residents; property and business owners; non-motorized transportation advocates; environmental preservation organizations; and transit, affordable housing, and public health agencies.
- **LU31:** Create a strategy in partnership with the adjoining neighborhoods for phasing redevelopment of current land uses to those suited for Transit-Oriented Communities (TOCs), taking into account when the city's development needs and market demands are ready for change.
- **LU32:** Allow and encourage uses in station areas that will foster the creation of communities that are socially, environmentally, and economically sustainable.
- **LU33:** Regulate design of station areas to serve the greatest number of people traveling to and from Shoreline. Combine appropriate residential densities with a mix of

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commercial and office uses, and multimodal transportation facilities.

- **LU34:** Pursue market studies to determine the feasibility of developing any of Shoreline's station areas as destinations (example: regional job, shopping, or entertainment centers).
- **LU35:** Identify the market and potential for redevelopment of public properties located in station and study areas.
- **LU36:** Encourage development of station areas as inclusive neighborhoods in Shoreline with connections to other transit systems, commercial nodes, and neighborhoods.
- **LU37:** Regulate station area design to provide transition from high-density multifamily residential and commercial development to single-family residential development.
- **LU38:** Through redevelopment opportunities in station areas, promote restoration of adjacent streams, creeks, and other environmentally sensitive areas; improve public access to these areas; and provide public education about the functions and values of adjacent natural areas.
- **LU39:** Use the investment in light rail as a foundation for other community enhancements.
- **LU40:** Explore and promote a reduced dependence upon automobiles by developing transportation alternatives and determining the appropriate number of parking stalls required for TOCs. These alternatives may include: ride-

sharing or vanpooling, car-sharing (e.g. Zipcar), bikesharing, and walking and bicycle safety programs.

- **LU41:** Consider a flexible approach in design of parking facilities that serve light rail stations, which could be converted to other uses if demands for parking are reduced over time.
- **LU42:** Transit Oriented Communities should include nonmotorized corridors, including undeveloped rights-ofway, which are accessible to the public, and provide shortcuts for bicyclists and pedestrians to destinations and transit. These corridors should be connected with the surrounding bicycle and sidewalk networks.
- **LU43:** Employ design techniques and effective technologies that deter crime and protect the safety of transit users and neighbors.



Example of affordable housing built at High Point, King County Housing Authority



# Other Relevant Comprehensive Plan Goals and Policies

In addition to the specific Land Use policies pertaining to the light rail station area listed above, the following Comprehensive Plan goals and policies are relevant to the subarea.

#### **CITIZEN PARTICIPATION**

Citizen participation goals and policies guide all areas of planning in the City of Shoreline, and as such are relevant to the 145<sup>th</sup> Street Station Subarea Planned Action.

## Comprehensive Plan Definition of Transit-Oriented Communities (TOCs):

Shoreline's Comprehensive Plan defines transitoriented communities as "Transit-Oriented Communities (TOCs) are mixed-use residential or commercial areas designed to maximize access to public transport, and often incorporate features to encourage transit ridership. A TOC typically has a center with a transit station, surrounded by relatively high-density development, with progressively lowerdensity development spreading outward from the center. TOCs generally are located within a radius of 1/4 to 1/2 mile from a transit stop, as this is considered to be an appropriate scale for pedestrians."

#### GOALS

**CP I:** To maintain and improve the quality of life in the community by offering a variety of opportunities for public involvement in community planning decisions.

#### POLICIES

- **CP1:** Encourage and facilitate public participation in appropriate planning processes, and make those processes user-friendly.
- **CP2:** Consider the interests of the entire community, and the goals and policies of this Plan before making planning decisions. Proponents of change in planning guidelines should demonstrate that the proposed change responds to the interests and changing needs of the entire city, balanced with the interests of the neighborhoods most directly impacted by the project.
- **CP3:** Ensure that the process that identifies new, or expands existing, planning goals and policies considers the effects of potential changes on the community, and results in decisions that are consistent with other policies in the Comprehensive Plan.
- **CP4:** Consider community interests and needs when developing modifications to zoning or development regulations.
- **CP5:** Encourage and emphasize open communication between developers and neighbors about compatibility issues.



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- **CP6:** Utilize a variety of approaches, encouraging a broad spectrum of public viewpoints, wherever reasonable, to oversee major revisions to the general elements and subareas of the Comprehensive Plan.
- **CP7:** Educate residents about various planning and development processes, how they interrelate, and when community input will be most influential and effective.
- **CP8:** Consider the interests of present and future residents over the length of the planning period when developing new goals, policies, and implementing regulations.

#### LAND USE GOALS AND POLICIES

The City's Comprehensive Plan Land Use Element was reviewed to identify the goals and policies most relevant to the subarea. In addition to the land use policies developed to specifically guide station subarea planning, summarized in Chapter 2, the following land use goals and policies also are relevant.

#### GOALS

- **Goal LU I:** Encourage development that creates a variety of housing, shopping, entertainment, recreation, gathering spaces, employment, and services that are accessible to neighborhoods.
- **Goal LU II:** Establish land use patterns that promote walking, biking, and using transit to access goods, services, education, employment, recreation.

- **Goal LU III:** Create plans and strategies that implement the City's Vision 2029 and Light Rail Station Area Planning Framework Goals for transit supportive development to occur within a ½ mile radius of future light rail stations.
- **Goal LU IV:** Work with regional transportation providers to develop a system that includes two light rail stations in Shoreline, and connects all areas of the city to high-capacity transit using a multimodal approach.
- **Goal LU V:** Enhance the character, quality, and function of existing residential neighborhoods while accommodating anticipated growth.
- **Goal LU VI:** Encourage pedestrian-scale design in commercial and mixed use areas.
- **Goal LU VII:** Plan for commercial areas that serve the community, are attractive, and have long-term economic vitality.
- **Goal LU VIII:** Encourage redevelopment of the Aurora corridor from a commercial strip to distinct centers with variety, activity, and interest. (*This goal is relevant to where the N 145<sup>th</sup> Street corridor meets the Aurora Avenue N corridor.*)
- Goal LU X:Nominate Shoreline as a Regional Growth Center<br/>as defined by the Puget Sound Regional Council.<br/>(Implementation of the 145<sup>th</sup> Street Station

# Subarea Plan would build capacity for additional growth to support this goal.)

**Goal LU XII:** Increase access to healthy food by encouraging the location of healthy food purveyors, such as grocery stores, farmers markets, and community food gardens in proximity to residential uses and transit facilities.

#### POLICIES

#### **Residential Land Use**

- LU1: The Low Density Residential land use designation allows single-family detached dwelling units. Other dwelling types, such as duplexes, single-family attached, cottage housing, and accessory dwellings may be allowed under certain conditions. The permitted base density for this designation may not exceed 6 dwelling units per acre.
- LU2: The Medium Density Residential land use designation allows single family dwelling units, duplexes, triplexes, zero lot line houses, townhouses, and cottage housing. Apartments may be allowed under certain conditions. The permitted base density for this designation may not exceed 12 dwelling units per acre.
- **LU3:** The High Density Residential designation is intended for areas near employment and/or commercial areas, where high levels of transit service are present or likely. This designation creates a transition between commercial uses and lower intensity residential uses. Some

commercial uses may also be permitted. The permitted base density for this designation may not exceed 48 dwelling units per acre.

- **LU4:** Allow clustering of residential units to preserve open space and reduce surface water run-off.
- **LU5:** Review and update infill standards and procedures that promote quality development, and consider the existing neighborhood.
- **LU6:** Protect trees and vegetation, and encourage additional plantings that serve as buffers. Allow flexibility in regulations to protect existing stands of trees.
- **LU7:** Promote small-scale commercial activity areas within neighborhoods that encourage walkability, and provide opportunities for employment and "third places".
- **LU8:** Provide, through land use regulation, the potential for a broad range of housing choices and levels of affordability to meet the changing needs of a diverse community.

#### Mixed Use and Commercial Land Use

LU9: The Mixed-Use 1 (MU1) designation encourages the development of walkable places with architectural interest that integrate a wide variety of retail, office, and service uses, along with form-based maximum density residential uses. Transition to adjacent single-family neighborhoods may be accomplished through



appropriate design solutions. Limited manufacturing uses may be permitted under certain conditions.

- LU10: The Mixed-Use 2 (MU2) designation is similar to the MU1 designation, except it is not intended to allow more intense uses, such as manufacturing and other uses that generate light, glare, noise, or odor that may be incompatible with existing and proposed land uses. The Mixed-Use 2 (MU2) designation applies to commercial areas not on the Aurora Avenue N or Ballinger Way corridors, such as Ridgecrest, Briarcrest, Richmond Beach, and North City. This designation may provide retail, office, and service uses, and greater residential densities than are allowed in low-density residential designations, and promotes pedestrian connections, transit, and amenities.
- LU11: The Town Center designation applies to the area along the Aurora corridor between N 170th Street and N 188th Street and between Stone Avenue N and Linden Avenue N, and provides for a mix of uses, including retail, service, office, and residential with greater densities.
- **LU12:** Reduce impacts to single-family neighborhoods adjacent to mixed use and commercial land uses with regard to traffic, noise, and glare through design standards and other development criteria.
- **LU13:** Encourage the assembly and redevelopment of key, underdeveloped parcels through incentives and public/private partnerships.

#### **Other Land Uses**

- **LU15:** The Public Facilities land use designation applies to a number of current or proposed facilities within the community. If the use becomes discontinued, underlying zoning shall remain unless adjusted by a formal amendment.
- **LU16:** The Public Open Space land use designation applies to all publicly owned open space and to some privately owned property that might be appropriate for public acquisition. The underlying zoning for this designation shall remain until the City studies and approves the creation of a complementary zone for this designation.
- **LU17:** The Private Open Space land use designation applies to all privately owned open space. It is anticipated that the underlying zoning for this designation shall remain.
- **LU19:** Land Use and Mobility Study Areas designate areas to be studied with regard to subarea planning for light rail stations. The underlying zoning for this designation remains unless it is changed through an amendment to the Comprehensive Plan Land Use Map and Development Code.

#### **Light Rail Station Areas**

These policies, LU20 through LU43 were presented earlier in this chapter. The 145<sup>th</sup> Street Station Subarea Planned Action is directly relevant to these policies, and the policies would best be

supported and reinforced through implementation of either action alternative.

#### **Transit & Parking**

- **LU49:** Consider the addition of compatible mixed-uses and shared (joint use) parking at park and ride facilities.
- **LU50:** Work with transit providers to site and develop park and rides with adequate capacity and in close proximity to transit service.
- **LU51:** Encourage large commercial or residential projects to include transit stop improvements when appropriate.
- LU52: Parking requirements should be designed for average need, not full capacity. Include regulatory provisions to reduce parking standards, especially for those uses located within ¼ mile of high-capacity transit, or serving a population characterized by low rates of car ownership. Other parking reductions may be based on results of the King County Right-Sized Parking Initiative.
- **LU53:** Examine the creation of residential parking zones or other strategies to protect neighborhoods from spillover by major parking generators.

#### Sustainable Land Use

**LU54:** Educate the community about sustainable neighborhood development concepts as part of the subarea planning

processes to build support for future policy and regulatory changes.

- **LU55:** Explore whether "EcoDistricts" could be an appropriate means of neighborhood empowerment, and a mechanism to implement triple-bottom-line sustainability goals by having local leaders commit to ambitious targets for green building, smart infrastructure, and behavioral change at individual, household, and community levels.
- **LU56:** Initiate public/private partnerships between utilities, and support research, development, and innovation for energy efficiency and renewable energy technology.
- **LU57:** Explore providing incentives to residents and businesses that improve building energy performance and/or incorporate onsite renewable energy.
- **LU58:** Support regional and state Transfer of Development Rights (TDR) programs throughout the city where infrastructure improvements are needed, and where additional density, height, and bulk standards can be accommodated.
- **LU59:** Consider social equity and health issues in siting uses, such as manufacturing and essential public facilities, to provide protection from exposure to harmful substances and environments.



# **Essential Public Facilities (EPF)**

There are no Essential Public Facilities (EPFs) located within the areas proposed for zoning changes under the action Alternatives 2, 3, and 4, and at this time, it is not anticipated that EPFs meeting the definition in the Revised Code of Washington (RCW) 36.70A.200(1) would be located or sited within the station subarea. While the proposed light rail facilities classify as EPFs, they are not the direct focus of this DEIS.

#### Water Quality and Drainage

**LU66:** Design, locate, and construct surface water facilities to:

- promote water quality;
- enhance public safety;
- preserve and enhance natural habitat;
- protect critical areas; and
- reasonably minimize significant, individual, and cumulative adverse impacts to the environment.
- **LU67:** Pursue state and federal grants to improve surface water management and water quality.
- **LU68:** Protect water quality through the continuation and possible expansion of City programs, regulations, and pilot projects.
- **LU69:** Protect water quality by educating citizens about proper waste disposal and eliminating pollutants that enter the stormwater system.

- **LU70:** Maintain and enhance natural drainage systems to protect water quality, reduce public costs, protect property, and prevent environmental degradation.
- **LU72:** Where feasible, stormwater facilities, such as retention and detention ponds, should be designed to provide supplemental benefits, such as wildlife habitat, water quality treatment, and passive recreation.

# **COMMUNITY DESIGN**

Goals and policies related of the Community Design Element of the Comprehensive Plan are directly relevant to the 145<sup>th</sup> Street Station Subarea Planned Action.

# GOALS

- **Goal CD I:** Promote community development and redevelopment that is aesthetically pleasing, functional, and consistent with the City's vision.
- **Goal CD II:** Design streets to create a cohesive image, including continuous pedestrian improvements that connect to the surrounding neighborhoods.
- **Goal CD III:** Expand on the concept that people using places and facilities draws more people.
- **Goal CD IV:** Encourage historic preservation to provide context for people to understand their community's past.

# POLICIES

# Site and Building Design

- **CD1:** Encourage building design that creates distinctive places in the community.
- **CD2:** Refine design standards so new projects enhance the livability and the aesthetic appeal of the community.
- **CD3:** Encourage commercial, mixed–use, and multifamily development to incorporate public amenities, such as public and pedestrian access, pedestrian-oriented building design, mid-block connections, public spaces, activities, and solar access.
- **CD4:** Buffer the visual impact on residential areas of commercial, office, industrial, and institutional development.
- **CD5:** Encourage architectural elements that provide protection from the weather.

#### Signs

- **CD6:** Encourage signage to be complementary in scale to the building architecture and site design.
- **CD7:** Discourage multiple or large signs that clutter, distract, or dominate the streetscape of commercial areas.

- **CD9:** Encourage the consolidation of signs on a single structure where a commercial development includes multiple businesses.
- **CD10:** Encourage signs on multi-tenant buildings to be complementary in size and style for all commercial and mixed-use zones.
- **CD11:** Discourage signage that is distracting to drivers.
- **CD12:** Improve permit process for temporary signs or banners.

# Vegetation and Landscaping

- **CD13:** Encourage the use of native plantings throughout the city.
- **CD14:** Encourage development to consolidate onsite landscape areas to be large enough to balance the scale of the development.
- **CD15:** Encourage concentrated seasonal planting in highly visible, public and semi-public areas.
- **CD16:** Where feasible, preserve significant trees and mature vegetation.
- **CD17:** Prohibit use of invasive species in required landscaping, and encourage use of native plant species whenever possible.



#### **Open Space**

**CD18:** Preserve, encourage, and enhance open space as a key element of the community's character through parks, trails, water features, and other significant properties that provide public benefit.

#### **Public Spaces**

- **CD19:** Preserve and enhance views from public places of water, mountains, or other unique landmarks as valuable civic assets.
- **CD20:** Provide public spaces of various sizes and types throughout the community.
- **CD21:** Design public spaces to provide amenities and facilities such as seating, lighting, landscaping, kiosks, and connections to surrounding uses and activities that contribute to a sense of security.
- **CD22:** Consider Crime Prevention through Environmental Design (CPTED) principles when developing mixed use, commercial and high-density residential uses.
- **CD23:** Utilize landscaping buffers between different uses to provide for natural transition, noise reduction, and delineation of space while maintaining visual connection to the public amenity.
- **CD24:** Encourage building and site design to provide solar access, as well as protection from weather.

### **Public Art**

- **CD25:** Encourage a variety of artwork and arts activities in public places, such as parks, public buildings, rights-of-way, and plazas.
- **CD26:** Encourage private donations of art for public display and/or money dedicated to the City's Municipal Art Fund.

#### Sidewalks, Walkways and Trails

**CD27:** Where appropriate and feasible, provide lighting, seating, landscaping, and other amenities for sidewalks, walkways, and trails.

# **Street Corridors**

- **CD28:** Use the Green Street standards in the Master Street Plan to provide an enhanced streetscape, including street trees, landscaping, natural surface water management techniques, lighting, pathways, crosswalks, pedestrian and bicycle facilities, decorative paving, signs, seasonal displays, and public art.
- **CD29:** Provide identity and continuity to street corridors by using a comprehensive street tree plan and other landscaping standards to enhance corridor appearance and create distinctive districts.
- **CD30:** Provide pedestrian gathering spaces to unify corners of key intersections involving principal arterials.

- **CD31:** Establish and maintain attractive gateways at entry points into the city.
- **CD32:** Use Low Impact Development techniques or green street elements, except when determined to be unfeasible. Explore opportunities to expand the use of natural surface water treatment in the right-of-way through partnerships with public and private property owners.

#### Freeway

**CD33:** Encourage the use of visual barriers and sound absorption methods to reduce impacts from the freeway to residential neighborhoods.

#### **Neighborhood Commercial**

- **CD34:** Develop walkable commercial areas that provide adjacent neighborhoods with goods and services.
- **CD35:** Encourage buildings to be sited at or near the public sidewalk.

#### Residential

**CD36:** Support neighborhood improvement projects with City grants. Possible projects include signs, crosswalks, traffic calming, fencing, special lighting, street furniture, trails, and landscaping.

**CD37:** Minimize the removal of existing vegetation, especially mature trees, when improving streets or developing property.

#### **Historic Preservation**

- **CD38:** Preserve, enhance, and interpret Shoreline's history.
- **CD39:** Recognize the heritage of the community by naming or renaming parks, streets, and other public places with their original historic names or after major figures and events.
- **CD40:** Educate the public about Shoreline's history through commemoration and interpretation.
- **CD42:** Develop incentives, such as fee waivers and code flexibility to encourage preservation of historic resources, including those that are currently landmarked, and sites that are not yet officially designated.
- **CD43:** Encourage both public and private stewardship of historic sites and structures.
- **CD44:** Work cooperatively with other jurisdictions, agencies, organizations, and property owners to identify and preserve historic resources.
- **CD45:** Facilitate designation of historic landmark sites and structures to ensure that these resources will be recognized and preserved.

#### HOUSING

GOALS

- **Goal H I:** Provide sufficient development capacity to accommodate the twenty year growth forecast and promote other goals, such as creating demand for transit and local businesses through increased residential density along arterials; and improved infrastructure, like sidewalks and stormwater treatment, through redevelopment.
- **Goal H II:** Encourage development of an appropriate mix of housing choices through innovative land use and well-crafted regulations.
- Goal H III: Preserve and develop housing throughout the city that addresses the needs of all economic segments of the community, including underserved populations, such as households making less than 30% of Area Median Income.
- **Goal H IV:** "Protect and connect" residential neighborhoods so they retain identity and character, yet provide amenities that enhance quality of life.
- **Goal H V:** Integrate new development with consideration to design and scale that complements existing neighborhoods, and provides effective transitions between different uses and intensities.

**Goal H VI:** Encourage and support a variety of housing opportunities for those with special needs, specifically older adults and people with disabilities.

Goal H VII:Collaborate with other jurisdictions and<br/>organizations to meet housing needs and address<br/>solutions that cross jurisdictional boundaries.

**Goal H VIII:** Implement recommendations outlined in the Comprehensive Housing Strategy.

Goal H IX:Develop and employ strategies specifically<br/>intended to attract families with young children<br/>in order to support the school system.

#### POLICIES

#### Facilitate Provision of a Variety of Housing Choices

- **H1:** Encourage a variety of residential design alternatives that increase housing choice.
- **H2:** Provide incentives to encourage residential development in commercial zones, especially those within proximity to transit, to support local businesses.
- **H3:** Encourage infill development on vacant or underutilized sites.
- **H4:** Consider housing cost and supply implications of proposed regulations and procedures.
- **H5:** Promote working partnerships with public and private groups to plan and develop a range of housing choices.
- H6: Consider regulations that would allow cottage housing in residential areas, and revise the Development Code to allow and create standards for a wider variety of housing styles.

#### Promote Affordable Housing Opportunities

**H7:** Create meaningful incentives to facilitate development of affordable housing in both residential and commercial zones, including consideration of exemptions from certain development standards in instances where strict application would make incentives infeasible.

- H8: Explore a variety and combination of incentives to encourage market rate and non-profit developers to build more units with deeper levels of affordability.
- **H9:** Explore the feasibility of creating a City housing trust fund for development of low income housing.
- **H10:** Explore all available options for financing affordable housing, including private foundations and federal, state, and local programs, and assist local organizations with obtaining funding when appropriate.
- H11: Encourage affordable housing availability in all neighborhoods throughout the city, particularly in proximity to transit, employment, and/or educational opportunities.
- **H12:** Encourage that any affordable housing funded in the city with public funds remains affordable for the longest possible term, with a minimum of 50 years.
- H13: Consider revising the Property Tax Exemption (PTE) incentive to include an affordability requirement in areas of Shoreline where it is not currently required, and incorporate tiered levels so that a smaller percentage of units would be required if they were affordable to lower income households.
- **H14:** Provide updated information to residents on affordable housing opportunities and first-time home ownership programs.



- **H15:** Identify and promote use of surplus public and quasipublicly owned land for housing affordable to low and moderate income households.
- **H16:** Educate the public about community benefits of affordable housing in order to promote acceptance of local proposals.
- **H17:** Advocate for regional and state initiatives to increase funding for housing affordability.
- **H18:** Consider mandating an affordability component in Light Rail Station Areas or other Transit-Oriented Communities.
- **H19:** Encourage, assist, and support non-profit agencies that construct, manage, and provide services for affordable housing and homelessness programs within the city.
- **H20:** Pursue public-private partnerships to preserve existing affordable housing stock and develop additional units.

#### Maintain and Enhance Neighborhood Quality

- **H21:** Initiate and encourage equitable and inclusive community involvement that fosters civic pride and positive neighborhood image.
- **H22:** Continue to provide financial assistance to low-income residents for maintaining or repairing health and safety features of their homes through a housing rehabilitation program.

- Draft Environmental Impact Statement
- **H23:** Assure that site, landscaping, building, and design regulations create effective transitions between different land uses and densities.
- **H24:** Explore the feasibility of implementing alternative neighborhood design concepts into the City's regulations.

#### **Address Special Housing Needs**

- **H25:** Encourage, assist, and support social and health service organizations that offer housing programs for targeted populations.
- **H26:** Support development of emergency, transitional, and permanent supportive housing with appropriate services for people with special needs, such as those fleeing domestic violence, throughout the city and region.
- **H27:** Support opportunities for older adults and people with disabilities to remain in the community as their housing needs change, by encouraging universal design or retrofitting homes for lifetime use.
- **H28:** Improve coordination among the County and other jurisdictions, housing and service providers, and funders to identify, promote, and implement local and regional strategies that increase housing opportunities.
- **H29:** Support the development of public and private, short-term and long-term housing and services for Shoreline's population of people who are homeless.

# **Draft Environmental Impact Statement**

#### **Participate in Regional Housing Initiatives**

- **H30:** Collaborate with King and Snohomish Counties, other neighboring jurisdictions, and the King County Housing Authority and Housing Development Consortium to assess housing needs, create affordable housing opportunities, and coordinate funding.
- **H31:** Partner with private and not-for-profit developers, social and health service agencies, funding institutions, and all levels of government to identify and address regional housing needs.
- **H32:** Work to increase the availability of public and private resources on a regional level for affordable housing and prevention of homelessness, including factors related to cost-burdened households, like availability of transit, food, health services, employment, and education.
- **H33:** Support and encourage legislation at the county, state, and federal levels that would promote the City's housing goals and policies.

#### TRANSPORTATION

#### GOALS

**Goal T I:** Maintain the transportation infrastructure so that it is safe and functional.

- **Goal T II:** Develop a bicycle system that is connective, safe, and encourages bicycling as a viable alternative to driving.
- Goal T III: Provide a pedestrian system that is safe, connects to destinations, accesses transit, and is accessible by all.

**Goal T IV:** Work with transit providers and regional partners to develop and implement an efficient and effective multimodal transportation system to address overall mobility and accessibility, and which maximizes the people carrying capacity of the surface transportation system.

- **Goal T V:** Protect the livability and safety of neighborhoods from the adverse impacts of the automobile.
- Goal T VI: Encourage alternative modes of transportation to reduce the number of automobiles on the road, promote a healthy city, and reduce carbon emissions.

Goal T VII:Develop a transportation system that enhances<br/>the delivery and transport of goods and services.

**Goal T VIII:** Coordinate the implementation and development of Shoreline's transportation system with neighboring transit systems and regional partners.



- Goal T IX: Support and encourage increased transit coverage and service to connect local and regional destinations to improve mobility options for all Shoreline residents.
- Goal T X: Secure reliable funding to ensure continuous maintenance and improvement of the transportation system.

POLICIES

#### Sustainability and Quality of Life

- Work with the community and regional partners to create standards for development of the Light Rail Station
   Special Study Areas identified in the Land Use Map (Figure LU-1) and to implement Light Rail Framework
   Goals, which became LU20-LU43.
- **T2:** Place a higher priority on pedestrian, bicycle, and automobile safety than vehicle capacity improvements at intersections.
- **T3:** Reduce the impact of the city's transportation system on the environment through the use of technology, expanded transit use, and non-motorized transportation options.
- **T4:** Enhance neighborhood safety and livability. Use engineering, enforcement, and educational tools to improve traffic safety on city roadways.

- Communicate with and involve residents and businesses in the development and implementation of
- transportation projects.

T5:

- **T6:** Support and promote opportunities and programs so residents have options to travel throughout Shoreline and the region using modes other than single-occupancy vehicles.
- **T7:** Implement the City's Commute Trip Reduction Plan.
- **T8:** In accordance with Complete Streets practices and guidelines, new or rebuilt streets shall address, as much as practical, right-of-way use by all users.
- **T9:** Develop a comprehensive, detailed street lighting and outdoor master lighting plan to guide ongoing public and private street lighting efforts.
- **T10:** Use Low Impact Development techniques or other elements of complete or green streets, except when determined to be infeasible. Explore opportunities to expand the use of natural stormwater treatment in the right-of-way through partnerships with public and private property owners.
- **T11:** Site, design, and construct transportation projects and facilities to avoid or minimize negative environmental impacts to the extent feasible.
- **T12:** Develop a regular maintenance program and schedule for all components of the transportation infrastructure.

Maintenance schedules should be based on safety/imminent danger and preservation of transportation resources.

- **T13:** Direct service and delivery trucks and other freight transportation to appropriate streets so that they can move through Shoreline safely and efficiently, while minimizing impacts to neighborhoods.
- **T14:** Implement a strategy for regional coordination that includes the following activities:
  - Identify important transportation improvements in Shoreline that involve other agencies. These may include improvements that will help keep traffic on I-5 and off of Shoreline streets, such as changes to onramp metering and construction of a southbound collector-distributor lane from NE 205th Street to NE 145th Street;
  - Remain involved in federal, state, regional, and county budget and appropriations processes;
  - Participate in regional and county planning processes that will affect the City's strategic interests;
  - Form strategic alliances with potential partners, such as adjacent jurisdictions or like-minded agencies;
  - Develop legislative agendas, and meet with federal and state representatives who can help fund key projects;
  - Develop a regional legislative agenda and meet with area representatives from the Puget Sound Regional Council, Sound Transit, and King County Council; and

- Develop partnerships with the local business community to advocate at the federal, state, and regional level for common interests.
- **T15:** Balance the necessity for motor vehicle access to and from new development with the need to minimize traffic impacts to existing neighborhoods.
- **T16:** Design and development standards that are adopted to minimize the negative traffic impacts of new development should also take into consideration the needs of the new residents that will occupy the buildings.
- **T17:** Maintain the existing street grid network to maximize multimodal connectivity throughout the city. Utilize mechanisms that are appropriate for different street classifications to address increased traffic volumes and speeds.

# **Bicycle System**

- **T18:** Implement the Bicycle System Plan included in the City's Transportation Master Plan. Develop a program to construct and maintain bicycle facilities that are safe, connect to destinations, access transit, and are easily accessible. Use short-term improvements, such as signage and markings, to identify routes when large capital improvements will not be constructed for several years.
- **T19:** Develop standards for creation of bicycle facilities.



**T20:** Educate residents about bicycle safety, health benefits of bicycling, and options for bicycling in the city. This program should include coordination or partnering with outside agencies.

#### **Pedestrian System**

- **T21:** Implement the Pedestrian System Plan included in the City's TMP through a combination of public and private investments.
- T22: When identifying transportation improvements, prioritize construction of sidewalks, walkways, and trails.
   Pedestrian facilities should connect to destinations, access transit, and be accessible by all.
- **T23:** Design crossings that are appropriately located, and provide safety and convenience for pedestrians.
- **T24:** Develop flexible sidewalk standards to fit a range of locations, needs, and costs.
- **T25:** Develop a public outreach program to inform residents about options for walking in the city, and educate residents about pedestrian safety and health benefits of walking. This program should include coordination or partnering with outside agencies.

#### **Transit System**

- **T26:** Make transit a more convenient, appealing, and viable option for all trips through implementation of the Shoreline Transit Plans included in the City's TMP.
- **T27:** Monitor the level and quality of transit service in the city, and advocate for improvements as appropriate.
- **T28:** Encourage development that is supportive of transit, and advocate for expansion and addition of new routes in areas with transit supportive densities and uses.
- **T29:** Encourage transit providers to expand service on existing transit routes, in accordance with adopted transit agency service guidelines.
- **T30:** Work with transportation providers to develop a safe, efficient, and effective multimodal transportation system to address overall mobility and accessibility. Maximize the people-carrying capacity of the surface transportation system.
- **T31:** Work with Metro Transit and the City of Seattle to implement "RapidRide" Bus Rapid Transit (BRT) service on the Aurora Avenue N corridor, and operate it as a convenient, appealing option for people who live or work in Shoreline, and those that want to visit.
- **T32:** Work with transit agencies to improve east-west service across the city, and service from Shoreline to the University of Washington.

- T33: Strengthen Aurora Avenue N as a high usage transit corridor that encourages cross-county, seamless service.
- T34: Work with Sound Transit, the Shoreline School District, the Washington State Department of Transportation, King County Metro Transit, the City of Seattle, and Shoreline neighborhoods to develop the final light rail alignment and station area plans for the areas surrounding the future Link Light Rail stations. (See LU20 through LU43 for additional light rail station study area policies.)
- T35: Work with King County Metro Transit and/or Sound Transit to develop a plan for bus service to serve the light rail station at Northgate coinciding with the opening of service at Northgate.
- Support and encourage the development of additional T36: high-capacity transit service in Shoreline.
- T37: Continue to install and support the installation of transit supportive infrastructure.
- Work with Metro Transit, Sound Transit, and Community T38: Transit to develop a bus service plan that connects residents to light rail stations, high-capacity transit corridors, and park and ride lots throughout the city.
- T39: Implement traffic mitigation measures at Light Rail Station Areas.

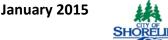
T40: Promote livable neighborhoods around the light rail stations through land use patterns, transit service, and transportation access.

### Master Street Plan

- T41: Design City transportation facilities with a primary purpose of moving people and goods via multiple modes, including automobiles, freight trucks, transit, bicycles, and walking, with vehicle parking identified as a secondary use.
- T42: Implement the standards outlined in the Master Street Plan for development of the city's roadways.
- Frontage improvements shall support the adjacent land T43: uses, and fit the character of the areas in which they are located.

# **Concurrency and Level of Service**

T44: Adopt Level of Service (LOS) D at the signalized intersections on arterials and unsignalized intersecting arterials within the city as the level of service standard for evaluating planning level concurrency and reviewing traffic impacts of developments, excluding the Highways of Statewide Significance and Regionally Significant State Highways (I-5, Aurora Avenue N, and Ballinger Way). Intersections that operate worse than LOS D will not meet the City's established concurrency threshold. The level of service shall be calculated with the delay method described in the Transportation Research Board's



Highway Capacity Manual 2010 or its updated versions. Adopt a supplemental level of service for Principal Arterials and Minor Arterials that limits the volume to capacity (V/C) ratio to 0.90 or lower, provided the V/C ratio on any leg of a Principal or Minor Arterial intersection may be greater than 0.90 if the intersection operates at LOS D or better.

These Level of Service standards apply throughout the city unless an alternative LOS standard is identified in the Transportation Element for intersections or road segments, where an alternate level of service has been adopted in a subarea plan, or for Principal or Minor Arterial segments where:

- Widening the roadway cross-section is not feasible, due to significant topographic constraints; or
- Rechannelization and safety improvements result in acceptable levels of increased congestion in light of the improved operational safety of the roadway.
- **T45:** The following levels of service are the desired frequency of transit service in the city:
  - Headways on all-day service routes should be no less than thirty minutes, including weekends and evenings (strive for ten minute or less headways during the day on these routes).
  - Headways on peak-only routes should be no more than twenty minutes (strive for fifteen minute or less headways on these routes).

#### **Transportation Improvements**

- **T46:** Projects should be scheduled, designed, and constructed with the following criteria taken into consideration:
  - Greatest benefit and service to as many people as possible;
  - Ability to be flexible and respond to a variety of needs and changes;
  - Coordination with other City projects to minimize costs and disruptions;
  - Ability to partner with private development and other agencies to leverage funding from outside sources; and
  - Flexibility in the implementation of projects when funding sources or opportunities arise.
- **T47:** Consider and coordinate the construction of new capital projects with upgrades or projects needed by utility providers operating in the city.
- **T48:** Pursue corridor studies on key corridors to determine improvements that address safety, capacity, and mobility, and support adjacent land uses.
- **T49:** Expand the city's pedestrian network. Prioritize projects shown on the Pedestrian System Plan included in the TMP using the following criteria:
  - Ability to be combined with other capital projects or leverage other funding;
  - Proximity to a school or park;
  - Located on an arterial;



- Located in an activity center, such as Town Center, North City, Ballinger, or connects to Aurora Avenue N;
- Connects to an existing walkway or the Interurban Trail;
- Connects to transit; and/or
- Links major destinations such as neighborhood businesses, high density housing, schools, and recreation facilities.
- **T50:** Prioritize projects that complete the city's bicycle networks, as shown on the Bicycle System Plan included in the TMP, using the following criteria:
  - Connects to the Interurban Trail;
  - Completes a portion of the routes connecting the Interurban and Burke Gilman Trails;
  - Provides access to bus rapid transit or light rail;
  - Connects to existing facilities;
  - Connects to high-density housing, commercial areas, or public facilities;
  - Connects to a regional route, or existing or planned facilities in a neighboring jurisdiction
  - Links to a school or park; and/or
  - Able to be combined with other capital projects or leverage other funding.
- **T52:** Continue to work with Seattle, King County, Sound Transit, and WSDOT to undertake a corridor study of 145th Street that would result in a plan for the corridor to improve safety, efficiency, and modality for all users.

# Funding

- **T53:** Aggressively seek grant opportunities to implement the City's TMP, and work to ensure that Shoreline receives regional and federal funding for its high- priority projects.
- **T54:** Support efforts at the state and federal level to increase funding for the transportation system.
- **T55:** Identify and secure funding sources for transportation projects, including bicycle and pedestrian projects.
- **T56:** Develop and implement a citywide transportation impact fee program to fund growth related transportation improvements, and when necessary, use the State Environmental Policy Act to provide traffic mitigation for localized development project impacts.
- **T57:** Provide funding for maintenance, preservation, and safety.

# ECONOMIC DEVELOPMENT

GOALS

- **Goal ED I:** Maintain and improve the quality of life in the community by:
  - Increasing employment opportunities and the job base;
  - Supporting businesses that provide goods and services to local and regional populations;



- Reducing reliance on residential property tax to fund City operations and capital improvements;
- Providing quality public services;
- Complementing community character; and
- Maximizing opportunities along Bus Rapid Transit corridors and areas to be served by light rail.
- Goal ED II:Promote retail and office activity to diversify<br/>sources of revenue, and expand the employment<br/>base.
- **Goal ED III:** Facilitate private sector economic development through partnerships and coordinating funding opportunities.
- **Goal ED IV:** Promote and sponsor improvements and events throughout Shoreline that attract investment.
- **Goal ED V:** Grow revenue sources that support City programs, services, and infrastructure.
- Goal ED VI: Support employers and new businesses that create more and better jobs.
- Goal ED VII: Encourage multi-story buildings for efficient land use.
- **Goal ED VIII:** Promote and support vibrant activities and businesses that grow the local economy.

**Goal ED IX:** Incorporate environmental quality and social equity into economic development as part of a triple-bottom-line approach to sustainability.

POLICIES

# Quality Of Life

- **ED1:** Improve economic vitality by:
  - Promoting existing businesses;
  - Recruiting new businesses;
  - Assisting businesses to create strategies and action plans through the Small Business Accelerator Program;
  - Encouraging increased housing density around commercial districts, especially those served by high-capacity rapid transit, to expand customer base; and
  - Developing design guidelines to enhance commercial areas with pedestrian amenities, and "protect and connect" adjacent residential areas.
- **ED2:** Promote non-motorized connections between commercial businesses, services, and residential neighborhoods.
- **ED3:** Encourage and support home-based businesses in the city, provided that signage, parking, storage, and noise levels are compatible with neighborhoods.
- **ED4:** Use incentives and development flexibility to encourage quality development.

- ED5: Attract a diverse population, including artists and innovators. Attract families with young children to support schools. Identify other targeted populations that contribute to a vibrant, multi-generational community.
- ED6: Work to reinvigorate economically blighted areas in Shoreline by establishing Community Renewal Areas with associated renewal plans.
- ED7: Enhance existing neighborhood shopping and community nodes to support increased commercial activity, neighborhood identity, and walkability.
- Explore whether creating an "Aurora Neighborhood" as a ED8: fifteenth neighborhood in Shoreline would allow the City to better serve citizens, and to capitalize on its infrastructure investment.
- ED9: Promote land use and urban design that allows for smart growth and dense nodes of transit-supportive commercial activity to promote a self-sustaining local economy.
- ED10: Coordinate with local community and technical colleges, and other institutions of higher learning, including the University of Washington, to train a workforce that is prepared for emerging jobs markets.
- **ED11:** Diversify and expand the city's job base, with a focus on attracting living-wage jobs, to allow people to work and shop in the community.

- ED13: Support and retain small businesses, and create an environment where new businesses can flourish.
- **ED14:** Encourage a mix of businesses that complement each other, and provide variety to the community to create activity and economic momentum.
- **ED15:** Direct capital improvements to key areas to promote the city's image, create a sense of place, and grow and attract businesses.
- **ED16:** Actively work with other jurisdictions, educational institutions, agencies, economic development organizations, and local business associations to stimulate business retention, and implement interlocal and regional strategies.
- ED17: Provide fast, predictable, and customer service-oriented permitting processes for commercial improvements, expansions, and developments.
- **ED18:** Use and/or conduct market research as needed to guide the City's economic development strategies and to assist businesses.
- **ED19:** Coordinate and initiate financial assistance for businesses, when appropriate, using county, state, and federal program funds, facility grants, loans, and revolving loan funds.



- **ED20:** Encourage businesses to plan for shared parking when redeveloping commercial areas in order to provide adequate (but not excessive) parking. Other considerations in design of mixed-use or multi-tenant parking areas should include opportunities for interconnectivity and shared space, number and placement of curb cuts, and routes for ingress/egress.
- **ED21:** Support public/private partnerships to facilitate or fund infrastructure improvements that will result in increased economic opportunity.
- **ED22:** Provide incentives for land uses that enhance the city's vitality through a variety of regulatory and financial strategies.
- **ED23:** Encourage the redevelopment of key and/or underused parcels through incentives and public/private partnerships.
- **ED24:** Attract and promote clean, green industry within the city.
- **ED25:** Develop regulations for food carts, which allow for incubator businesses while respecting established local restaurants, including temporary use for events.

# Placemaking

**ED26:** Consider establishing specific districts, such as cultural, entertainment, or ecological districts.

- **ED27:** Develop a vision and strategies for creating dense mixeduse nodes anchored by Aurora's retail centers, including how to complement, support, and connect them with mid-rise residential, office, and destination retail buildings.
- **ED28:** Practice the activities of placemaking:
  - Create unique cachet, or distinctive character;
  - Build infrastructure;
  - Collaborate;
  - Assist businesses that serve the community; and
  - Hone legislation.
- **ED29:** Reinvent Aurora Square to help catalyze a masterplanned, sustainable lifestyle destination.
- **ED30:** Unlock the Fircrest excess property to create living-wage jobs while respecting and complementing its existing function as a facility for people with disabilities.
- **ED31:** Plan the Light Rail Station Areas to create connectivity for appropriate growth.

ED32: Foster on-going placemaking projects:

- Revitalize development areas in:
  - o Town Center
  - o Echo Lake
  - o North City
  - o Richmond Beach
  - o Ridgecrest/Briarcrest
  - o Ballinger



- Attract mid-sized businesses;
- Support farmers market;
- Expand events and festivals;
- Surplus institutional property; and
- Support educational institutions.

# NATURAL ENVIRONMENT

# GOALS

- **Goal NE I:** Minimize adverse impacts on the natural environment through leadership, policy, and regulation, and address impacts of past practices where feasible.
- Goal NE II: Lead and support efforts to protect and improve the natural environment, protect and preserve environmentally critical areas, minimize pollution, and reduce waste of energy and materials.
- Goal NE III: Regulate land disturbances and development to conserve soil resources and protect people, property, and the environment from geologic hazards, such as steep slope, landslide, seismic, flood, or erosion hazard areas.
- **Goal NE IV:** Protect, enhance, and restore habitat of sufficient diversity and abundance to sustain indigenous fish and wildlife populations.
- Goal NE V:Protect clean air and the climate for present and<br/>future generations through reduction of

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greenhouse gas emissions, and promotion of efficient and effective solutions for transportation, clean industries, and development.

**Goal NE VI:** Manage the stormwater system through the preservation of natural systems and structural solutions in order to:

- Protect water quality;
- Provide for public safety and services;
- Preserve and enhance fish and wildlife habitat, and critical areas;
- Maintain a hydrologic balance; and
- Prevent property damage from flooding and erosion.

**Goal NE VII:** Continue to require that natural and on-site solutions, such as infiltration and rain gardens, be proven infeasible before considering engineered solutions, such as detention.

**Goal NE VIII:** Preserve, protect, and where feasible, restore wetlands, shorelines, and streams for wildlife, appropriate human use, and the maintenance of hydrological and ecological processes.

**Goal NE IX:** Use education and outreach to increase understanding, stewardship, and protection of the natural environment.

**Goal NE X:** Maintain and improve the city's tree canopy.



#### POLICIES

#### General

- **NE1:** Promote infill and concurrent infrastructure improvements in areas that are already developed in order to preserve rural areas, open spaces, ecological functions, and agricultural lands in the region.
- **NE2:** Preserve environmental quality by taking into account the land's suitability for development, and directing intense development away from critical areas.
- **NE3:** Balance the conditional right of private property owners to develop and alter their land with protection of native vegetation and critical areas.
- **NE4:** Conduct all City operations to minimize adverse environmental impacts by reducing consumption and waste of energy and materials; minimizing use of toxic and polluting substances; reusing, reducing, and recycling; and disposing of all waste in a safe and responsible manner.
- **NE5:** Support, promote, and lead public education and involvement programs to raise awareness about environmental issues; motivate individuals, businesses, and community organizations to protect the environment; and provide opportunities for the community and visitors to practice stewardship, and enjoy Shoreline's unique environmental features.

- **NE6:** Provide incentives for site development that minimizes environmental impacts.
- **NE7:** Coordinate with other governmental agencies, adjacent communities, and non-profit organizations to protect and enhance the environment.
- **NE8:** Continue to identify and map the location of all critical areas and buffers located within Shoreline. If there is a conflict between the mapped location and field information collected during project review, field information that is verified by the City shall govern.
- **NE9:** Environmentally critical areas may be designated as open space, and should be conserved and protected from loss or degradation wherever feasible.
- **NE10:** Remove regulatory barriers and create incentives to encourage the use of sustainable building methods and materials (such as those specified under certification systems like LEED, Built Green, Salmon-Safe, and Living Building Challenge) that may reduce impacts on the built and natural environment.

#### **Geological and Flood Hazard Areas**

- **NE11:** Mitigate drainage, erosion, siltation, and landslide impacts, while encouraging native vegetation.
- **NE12:** Seek to minimize risks to people and property in hazard areas through education and regulation.

- NE13: Research information available on tsunami hazards and map the tsunami hazard areas located in Shoreline. Consider the creation of development standards and emergency response plans for tsunami hazard areas to minimize tsunami-related impacts.
- **NE14:** Inform landowners about site development, drainage, and yard maintenance practices that affect slope stability and water quality.
- **NE15:** Develop technical resources for better understanding of overall hydrology, and utilize innovative approaches to resolve long-standing flooding issues.
- **NE16:** Prioritize the resolution of flooding problems based on public safety risk, property damage, and flooding frequency.
- **NE17:** Promote public education and encourage preparation in areas that are potentially susceptible to geological and flood hazards.

#### **Vegetation Protection**

**NE18:** Develop educational materials, incentives, policies, and regulations to conserve native vegetation on public and private land for wildlife habitat, erosion control, and human enjoyment. The City should establish regulations to protect mature trees and other native vegetation from the adverse impacts of residential and commercial development, including short-plat development.

- **NE19:** Minimize removal of healthy trees, and encourage planting of native species in appropriate locations.
- **NE20:** Minimize clearing and grading if development is allowed in an environmentally critical area or critical area buffer.
- **NE21:** Identify and protect wildlife corridors prior to, during, and after land development through public education, incentives, regulation, and code enforcement.
- **NE22:** Encourage the use of native and low-maintenance vegetation.

#### Wetlands and Habitat Protection

- **NE23:** Participate in regional species protection efforts, including salmon habitat enhancement and restoration.
- NE24: Preserve critical wildlife habitat, including those identified as priority species or priority habitats by the Washington Department of Fish and Wildlife, through regulation, acquisition, incentives, and other techniques. Habitats and species of local importance will also be protected in this manner.
- **NE25:** Strive to achieve a level of no net loss of wetlands function, area, and value within each drainage basin.
- **NE26:** Restore existing degraded wetlands where feasible.



**NE27:** Focus on wetland and habitat restoration efforts that will result in the greatest benefit for areas identified by the City as priority for restoration.

#### Streams and Water Resources

- **NE28:** Support and promote basin stewardship programs to prevent adverse surface water impacts, and to identify opportunities for watershed improvements.
- **NE29:** Stream alterations, other than habitat improvement should only occur when it is the only means feasible, and should be the minimum necessary.
- **NE30:** Identify and prioritize potential stream enhancement projects through surface water basin planning and its public participation process. Enhancement efforts may include daylighting of streams that have been diverted into underground pipes or culverts, removal of anadromous fish barriers, or other options to restore aquatic environments to a natural state.
- **NE31:** Work with citizen volunteers, state and federal agencies, and Indian tribes to identify, prioritize, and eliminate physical barriers and other impediments to anadromous fish spawning and rearing habitat.
- **NE32:** Preserve and protect natural surface water storage sites, such as wetlands, aquifers, streams, and water bodies that help regulate surface flows and recharge groundwater.

- **NE33:** Conserve and protect groundwater resources.
- **NE34:** Provide additional public access to Shoreline's natural features, including the Puget Sound shoreline. The City will attempt to reach community and neighborhood agreement on any proposal to improve access to natural features where the proposal has the potential to negatively impact private property owners.
- **NE35:** Educate the public on best management practices regarding use of pesticides and fertilizers to prevent run-off of chemicals and pollution of water bodies.

#### **Clean Air and Climate Protection**

- **NE36:** Support federal, state, and regional policies intended to protect clean air in Shoreline and the Puget Sound Basin.
- **NE37:** Advocate for expansion of mass transit and encourage car-sharing, cycling, and walking to reduce greenhouse gas emissions, and as an alternative to dependence on automobiles.
- **NE38:** Reduce the amount of air-borne particulates through continuation and possible expansion of the street-sweeping program, dust abatement on construction sites, education to reduce burning of solid and yard waste, and other methods that address particulate sources.
- **NE39:** Support and implement the Mayor's Climate Protection Agreement, climate pledges and commitments undertaken by the City, and other multi-jurisdictional

efforts to reduce greenhouse gases, address climate change, sea-level rise, ocean acidification, and other impacts of changing of global conditions.

#### Sustainability

- **NE40:** Establish policy decisions and priorities considering long-term impacts on natural and human environments.
- **NE41:** Lead by example and encourage other community stakeholders to commit to sustainability. Design our programs, policies, facilities, and practices as models to be emulated.
- **NE42:** Recognize that a sustainable community requires and supports economic development, human health, and social benefit. Make decisions using the "triple bottom line" approach to sustainability (environment, economy, and social equity).
- **NE43:** Promote community awareness, responsibility, and participation in sustainability efforts through public outreach programs and other opportunities for change. Serve as catalyst and facilitator for partnerships to leverage change in the broader community.
- **NE44:** Apply adaptive management techniques and clearly communicate findings to the Shoreline community: individuals, businesses, non-profits, utilities, and City decision-makers. Use analytical and monitoring tools with performance targets to evaluate investments.

- **NE45:** Design natural infrastructure into projects whenever feasible to mimic ecological processes.
- **NE46:** Create incentives to encourage enhancement and restoration of wildlife habitat on both public and private property through new and existing programs, such as the Backyard Wildlife Habitat stewardship certification program.

#### PARKS, RECREATION, AND OPEN SPACE

#### GOALS

- Goal PR I:Preserve, enhance, maintain, and acquire built<br/>and natural facilities to ensure quality<br/>opportunities exist.
- **Goal PR II:** Provide community-based recreational and cultural programs that are diverse and affordable.

**Goal PR III:** Meet the parks, recreation, and cultural service needs of the community by equitably distributing resources.

- **Goal PR IV:** Establish and strengthen partnerships with other public agencies, non-governmental organizations, volunteers, and City departments to maximize the public use of all community resources.
- **Goal PR V:** Engage the community in park, recreation, and cultural services decisions and activities.



#### POLICIES

- **PR1:** Preserve, protect, and enhance the city's natural, cultural, and historical resources; encourage restoration, education, and stewardship.
- **PR2:** Provide a variety of indoor and outdoor gathering places for recreational and cultural activities.
- **PR3:** Maintain current facilities, and plan, develop, and acquire assets as the need is identified.
- **PR4:** Maintain environmentally sustainable facilities that reduce waste, protect ecosystems, and address impacts of past practices.
- **PR5:** Create efficiencies and reduce maintenance costs by using contracted services and volunteers where feasible.
- **PR6:** Maintain safe, attractive facilities using efficient and environmentally sustainable practices.
- **PR7:** Encourage a variety of transportation options that provide better connectivity to recreation and cultural facilities.
- PR8: Improve accessibility and usability of existing facilities
- **PR9:** Provide and enhance recreational and cultural programs to serve all ages, abilities, and interests.
- **PR10:** Provide affordable programs and offer financial support for those who qualify.

- **PR11:** Create programs to support and encourage an active and healthy lifestyle.
- **PR12:** Determine the community's needs by conducting need assessments.
- **PR13:** Adjust program and facility offerings to align with demographic trends and needs assessment findings.
- **PR14:** Equitably distribute facilities and program offerings based on identified needs.
- **PR15:** Collaborate with and support partners to strengthen communitywide facilities and programs.
- **PR16:** Seek partners in the planning, enhancement, and maintenance of facilities and programs.
- **PR17:** Develop mechanisms for public outreach, communication, and coordination among partners.
- **PR18:** Encourage consistent and effective public involvement in short- and long-range park planning processes.
- **PR19:** Provide public relations and publicity efforts to inform citizens of communitywide opportunities.
- **PR20:** Create volunteer opportunities to encourage citizen involvement and participation.

### CAPITAL FACILITIES

GOALS

- Goal CF I:Provide adequate public facilities that address<br/>past deficiencies and anticipate the needs of<br/>growth through acceptable levels of service,<br/>prudent use of fiscal resources, and realistic<br/>timelines. To support Goal CF I:
  - Acquire Seattle Public Utilities (SPU) water system in Shoreline;
  - As outlined in the 2002 Interlocal Operating Agreement, complete the assumption of the Ronald Wastewater District; and prepare for the expiration of the Shoreline Water District franchise (scheduled for 2027) by evaluating the possibility of assumption and consolidation with the City's water system acquired from the City of Seattle (SPU), among other options.
- Goal CF II: Ensure that capital facilities and public services necessary to support existing and new development are available, concurrent with locally adopted levels of service and in accordance with Washington State Law.
- Goal CF III: Provide continuous, reliable, and cost-effective capital facilities and public services in the city and its Urban Growth Area in a phased, efficient manner, reflecting the sequence of development as described in other elements of the Comprehensive Plan.

- **Goal CF IV:** Enhance the quality of life in Shoreline through the planned provision of capital facilities and public services that are provided either directly by the City or through coordination with other public and private entities.
- **Goal CF V:** Facilitate, support, and/or provide citywide utility services that are:
  - Consistent, reliable, and equitable;
  - Technologically innovative, environmentally sensitive, and energy efficient;
  - Sited with consideration for location and aesthetics; and
  - Financially sustainable.
- **Goal CF VI:** Maintain and enhance capital facilities that will create a positive economic climate, and ensure adequate capacity to move people, goods, and information.

# POLICIES

# General

**CF1:** The City's 6-year CIP shall serve as the short-term budgetary process for implementing the long-term Capital Facility Plan (CFP). Project priorities and funding allocations incorporated in the CIP shall be consistent with the long-term CFP.

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- **CF2:** Obtain and maintain an inventory that includes locations and capacities of existing City-managed and non-City-managed capital facilities.
- **CF3:** Review capital facility inventory findings and identify future needs regarding improvements and space, based on adopted levels of service standards and forecasted growth, in accordance with this Plan and its established land uses.
- **CF4:** Coordinate with public entities that provide services within the City's planning area in development of consistent service standards.
- **CF5:** Identify, construct, and maintain infrastructure systems and capital facilities needed to promote the full use of the zoning potential in areas zoned for commercial and mixed-use.
- **CF6:** Ensure appropriate mitigation for both the community and adjacent areas if Shoreline is selected as a site for a regional capital facility, or is otherwise impacted by a regional facility's expansion, development, or operation.

#### Financing and Funding Priorities

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- **CF7:** Work with service providers to ensure that their individual plans have funding policies that are compatible with this element.
- **CF8:** Capital Facility improvements that are needed to correct existing deficiencies or maintain existing levels of service

should have funding priority over those that would significantly enhance service levels above those designated in the Comprehensive Plan.

- **CF9:** Improvements necessary to provide critical City services such as police, surface water, and transportation at designated service levels concurrent with growth shall have funding priority for City funds over improvements that are needed to provide capital facilities.
- **CF10:** Consider all available funding and financing mechanisms, such as utility rates, bonds, impacts fees, grants, and local improvement districts for funding capital facilities.
- **CF11:** Evaluate proposed public capital facility projects to identify net costs and benefits, including impacts on transportation, stormwater, parks, and other public services. Assign greater funding priority to those projects that provide a higher net benefit and provide multiple functions to the community over projects that provide single or fewer functions.
- **CF12:** Utilize financing options that best facilitate implementation of the CIP in a financially prudent manner.

#### **Mitigation and Efficiency**

**CF13:** Maximize on-site mitigation of development impacts to minimize the need for additional capital facility improvements in the community.

- **CF14:** Promote the co-location of capital facilities, when feasible, to enhance efficient use of land, reduce public costs, and minimize disruption to the community.
- **CF15:** Through site selection and design, seek opportunities to minimize the impact of capital facilities on the environment, and whenever possible, include enhancements to the natural environment.
- **CF16:** Promote water reuse and water conservation opportunities that diminish impacts on water, wastewater, and surface water systems, and promote conservation or improvement of natural systems.
- **CF17:** Encourage the use of ecologically sound site design in ways that enhance provision of utility services.
- **CF18** Support local efforts to minimize inflow and infiltration, and reduce excessive discharge of surface water into wastewater systems.

# **Coordination and Public Involvement**

- **CF19:** Provide opportunities for public participation in the development or improvement of capital facilities.
- **CF20:** Solicit and encourage citizen input in evaluating whether the City should seek to fund large communitywide capital facility improvements through voter-approved bonds.

- **CF22:** Actively work with providers to address deficiencies that pose a threat to public safety or health, or impediments to meeting identified service levels.
- **CF23:** Critically review updated capital facility plans prepared by special districts or other external service providers for consistency with the Land Use and Capital Facilities Elements of this Plan, and identify opportunities for:
  - Co-location of facilities;
  - Service enhancements and coordination with City facilities and services;
  - Development of public and environmental enhancements; and
  - Reductions to overall public costs for capital improvements.
- **CF24:** Track technological innovations to take advantage of opportunities to enhance services or create new utilities.

# Levels of Service

- **CF25:** Evaluate and establish designated levels of service to meet the needs of existing and anticipated development.
- **CF26:** Plan accordingly so that capital facility improvements needed to meet established level of service standards can be provided by the City or the responsible service providers.



CF27:	Identify deficiencies in capital facilities based on adopted	
	levels of service and facility life cycles, and determine the	
	means and timing for correcting these deficiencies.	

**CF28:** Resolve conflicts between level of service standards, capital improvement plans, and service strategies for interrelated service providers.

- **CF29:** Encourage the adequate provision of the full range of services, such as parks, schools, municipal facilities, solid waste, telecommunications, and emergency services for new development, at service levels that are consistent throughout the city.
- **CF30:** Work with all outside service providers to determine their ability to continue to meet service standards over the 20-year timeframe of the Comprehensive Plan.
- **CF31:** The City establishes the following levels of service as the minimum thresholds necessary to adequately serve development, as well as the minimum thresholds to which the City will strive to provide for existing development (see page 2-68).
- **CF32:** The City establishes the following targets to guide the future delivery of community services and facilities, and to provide a measure to evaluate the adequacy of actual services (see page 2-68).

UTILITIES	

GOALS

Goal U I:	Facilitate, support, and/or provide citywide utility
	services that are:

- Consistent, reliable, and equitable;
- Technologically innovative, environmentally sensitive, and energy efficient;
- Sited with consideration for location and aesthetics; and financially sustainable.

**Goal U II:** Facilitate the provision of appropriate, reliable utility services, whether through City-owned and operated services, or other providers.

Goal U III: Acquire Seattle Public Utilities water system in Shoreline.

#### POLICIES

**U1:** Coordinate with utility providers to ensure that the utility services are provided at reasonable rates citywide, and that those services meet service levels identified or recommended in the Capital Facilities Element.



# **City-Managed Capital Facilities and Services**

Type of Capital Facility or Service:	Level of Service
Park Facilities	Park Facility Classification and Service Areas:
	Regional Parks - Citywide
	• Large Urban Parks - Citywide
	• Community Parks - 1 ½ miles
	• Neighborhood Parks - ½ miles
	• Natural Areas - ½ miles
	Special Use Facilities - Citywide
	<ul> <li>Street Beautification Areas – None</li> </ul>
	The adopted 2011-2017 Parks, Recreation, and Open Space (PROS) Plan provides an inventory of park facilities by classification and service area. The PROS Plan creates an "Amenity Driven Approach" establishing an interconnected relationship between park facilities within the overall park system. Chapter 4 of the PROS Plan analyzes the target level of service for each classification.
Police	0.85 officers per 1,000 residents; and a response time of
	5 minutes or less to all high priority calls, and within 30
	minutes to all calls.
Transportation	As established by the Transportation Element, adopted
	Transportation Master Plan, and as provided in the
	Capital Facilities Supporting Analysis section.
Surface	Consistent with the level of service recommended in the
Water	most recently adopted Surface Water Master Plan.

# Non-City Managed Capital Facilities and Services

Type of Capital	Level of Service
Facility or	
Service:	
	Consistent with fire flow rates stated in the
Water	International Fire Code. Potable water as determined
	by the Washington State Department of Health.
	Collection of peak wastewater discharge, including
Wastewater	infiltration and inflow, resulting in zero overflow events
	per year due to capacity and maintenance inadequacies
	(or consistent with current health standards).
	The City of Shoreline is wholly within the boundaries of
Schools	the Shoreline School District. The City neither sets nor
	controls the level of service standards for area schools.
	The Shoreline School District is charged with ensuring
	there is adequate facility space and equipment to
	accommodate existing and projected student
	populations. The City coordinates land use planning
	with the school district to ensure there is adequate
	capacity in place or planned.

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- U2: Pursue alternative service provision options that may be more effective at providing services to our residents, including acquiring portions of the Seattle Public Utility water system, potential assumption of Ronald Wastewater District, and examining options with regard to the expiration of the Shoreline Water District franchise (scheduled for 2027).
- **U3:** Encourage and assist the timely provision of the full range of utilities within Shoreline in order to serve existing businesses, including home businesses, and promote economic development.
- **U4:** Support the timely expansion, maintenance, operation, and replacement of utility infrastructure in order to meet anticipated demand for growth identified in the Land Use Element.

# **Consistency and Coordination**

**U5:** Coordinate with other jurisdictions and governmental entities in the planning and implementation of multi-jurisdictional utility facility additions and improvements.

# **Mitigation and Efficiency**

- **U6:** Encourage the design, siting, construction, operation, and relocation or closure of all utility systems in a manner that:
  - Is cost effective;
  - Minimizes and mitigates impacts on adjacent land uses;

- Is environmentally sensitive; and
- Is appropriate to the location and need.
- **U7:** Encourage the co-location or joint use of trenches, conduits, or poles so that utilities may encourage expansion, maintenance, undergrounding, and upgrading facilities with the least amount of disruption to the community or of service delivery.

# Solid Waste

- **U8:** Monitor solid waste collection providers for adequacy of service and compliance with service contracts.
- **U9:** Support recycling and waste reduction efforts throughout the community.

# Electricity

- **U10:** Where found to be safe and appropriate, promote recreational use of utility corridors, such as trails, sport courts, and similar facilities.
- **U11:** Work with electric utility providers to limit trimming of trees and other vegetation to that which is necessary for the safety and maintenance of transmission facilities where feasible.
- **U12:** Promote the undergrounding of new and existing electric distribution lines, where physically and financially feasible, as streets are improved and/or areas are redeveloped, based on coordination with local utilities.

#### Telecommunications

- **U13:** Minimize impacts of telecommunication facilities and towers on the community.
- **U14:** Promote the undergrounding of telecommunication lines in coordination with the undergrounding of other utilities and capital facility systems.
- **U15:** Support the provision of high-quality cable and satellite service throughout the community.
- **U16:** Promote opportunities for distance learning and telecommuting to implement economic development and climate initiatives, such as encouraging more home-based businesses that provide jobs without increased traffic.
- **U17:** Encourage and work with telecommunication providers to develop networks which employ technologies that increase interconnectivity between different networks.
- **U18:** Work with utility companies and public institutions to develop a full range of community information services available to citizens and businesses through the telecommunication network.

#### Wireless Communications Facilities

**U19:** Facilitate access to reliable wireless communications services throughout the city, including increasing the service area on the western side of the city.

- **U20:** Protect community aesthetics by planning for well-sited and well-designed wireless service facilities that fit unobtrusively with the environment.
- **U21:** Manage the placement of all communication antennas, antenna support structures, buildings, and associated equipment to promote efficient service delivery and avoid unnecessary proliferation.

# Natural Gas

**U22:** Coordinate with natural gas utilities for improvements and expansion throughout the community, and support the eventual provision of full coverage of natural gas services.

# 2.5.7 Transportation Master Plan

The City of Shoreline Transportation Master Plan (TMP) was adopted in 2011, with amendments adopted in December 2012 and December 2013. Chapter 3 of the TMP, Sustainability and Quality of Life, references goals and policies along with management and implementation strategies to guide planning, design, and development of streets and transportation facilities in the city. The TMP cites specific goals and policies of the Comprehensive Plan (listed above) and encourages best practices in street design such as integration of green infrastructure and low impact development. The TMP also encourages the provision of complete streets that meet everyone's needs with facilities for all modes of transportation. Specific goals and policies cited in the TMP related to quality of life include:



- Comprehensive Plan Goal FG 13: Encourage a variety of transportation options that provide better connectivity within Shoreline and throughout the region.
- Goal T I: Provide safe and friendly streets for Shoreline citizens.
- Goal T II: Work with transportation providers to develop a safe, efficient and effective multimodal transportation system to address overall mobility and accessibility. Maximize the people-carrying capacity of the surface transportation system.
- Policy T1: Make safety the first priority of citywide transportation planning and traffic management. Place a higher priority on pedestrian, bicycle and automobile safety over vehicle capacity improvements at intersections.
- Policy T2: Reduce the impact of the City's transportation system on the environment through the use of technology, expanded transit use and nonmotorized transportation options.
- Policy T10: Transportation projects and facilities should be sited, designed and constructed to avoid or minimize negative environmental impacts to the extent feasible.

# **Implementation Strategies**

10.1. Minimize curb cuts (driveways) on arterial streets by combining driveways through the development review process and in implementing capital projects.

- 10.2 Implement the Transportation Master Plan that integrates the City's Complete Streets program. Promote adequate capacity on the roadways and intersections to provide access to homes and businesses.
- 10.3. Coordinate transportation infrastructure design and placement to serve multiple public functions when possible, i.e. integrate stormwater management, parks development and transportation facility design.
- 10.4. Implement a coordinated signal system that is efficient and flexible depending on demand or time of day and responsive to all types of users, including transit riders, bicyclists and pedestrians.
- 10.5. Require evaluation of the transportation impacts resulting from significant land use developments. Each development that requires a Transportation Impact Analysis should have project specific scoping that evaluates all transportation modes, including pedestrian, bicycle, and transit. A more specific impact analysis that includes activities such as pedestrian activity near schools or high traffic volumes outside of standard peak period travel times is required to address the unique transportation needs of some land uses.

Additional discussion about the TMP is provided in Section 3.3 of this DEIS.

# 2.5.8 Parks, Recreation, and Open Space (PROS) Master Plan

The PROS Master Plan was adopted July 25, 2011 and includes specific goals and policies that support:

- The preservation, enhancement, maintenance and acquisition of facilities
- Diverse, affordable community-based recreational, cultural and arts programs
- Equitable distribution of resources
- Partnerships that maximize the public use of all community resources
- Community engagement in parks, recreation and cultural service activities and decisions

The PROS plan vision is stated as: *Provide quality parks, recreation and cultural services to promote public health and safety; protect our natural environment; and enhance the quality of life of our community.* 

Key goals and policies include the following.

- GOAL 1 Preserve, enhance, maintain and acquire built and natural facilities to ensure quality opportunities exist.
- Policy 1.1: Preserve, protect and enhance natural, cultural and historical resources, and encourage restoration, education and stewardship.

- Policy 1.2: Provide a variety of indoor and outdoor gathering places for recreational and cultural activities.
- Policy 1.3: Maintain current facilities and plan, develop and acquire assets as the need is identified.
- Policy 1.4: Maintain environmentally sustainable facilities that reduce waste, protect ecosystems and address impacts of best practices.
- Policy 1.5: Create efficiencies and reduce maintenance costs by using contracted services and volunteers where feasible.
- Policy 1.6: Maintain safe, attractive facilities using efficient and environmentally sustainable practices.
- Policy 1.7: Encourage a variety of transportation options to provide better connectivity to recreation and cultural facilities.
- Policy 1.8: Improve accessibility and usability of existing facilities.

GOAL 2 Provide community-based recreational and cultural programs that are diverse and affordable.

- Policy 2.1: Provide and enhance recreational and cultural programs to serve all ages, abilities, and interests.
- Policy 2.2: Provide affordable programs and offer financial support for those who quality.



Policy 2.3: Create programs to support and encourage an active and healthy lifestyle.

GOAL 3 Meet the parks, recreation and cultural service needs of the community by equitably distributing resources.

- Policy 3.1: Determine the community's need by conducting need assessments.
- Policy 3.2: Adjust program and facility offerings to align with demographic trends and need assessment findings.
- Policy 3.3: Equitably distribute facilities and program offerings based on need.

GOAL 4 Establish and strengthen partnerships and other public agencies, non-governmental organizations, volunteers and City departments to maximize public use of all community resources.

- Policy 4.1: Collaborate with and support partners to strengthen community-wide facilities and programs.
- Policy 4.2: Seek partners in the planning, enhancement and maintenance of facilities and programs.
- Policy 4.3: Develop mechanisms for public outreach, communication and coordination among partners.

GOAL 5 Engage the community in park, recreation and cultural services decisions and activities.

- Policy 5.1: Encourage consistent and effective public involvement in the short and long-range park planning process.
- Policy 5.2: Provide public relations and publicity efforts to inform citizens of community-wide opportunities.
- Policy 5.3: Create volunteer opportunities to encourage citizen involvement and participation.

# 2.5.9 Surface Water Master Plan

Originally adopted in 2005 and updated in 2011, the City of Shoreline Surface Water Master Plan (SWMP) goals are:

- To serve as a management plan (i.e., business plan) to more efficiently manage the capital and operational (including maintenance and NPDES permit compliance) programs of the Surface Water Utility for the next five years, at which time the basin plans should be completed.
- To incorporate sustainability components into the recommended programs, projects, and regulations, as part of the commitment to create an environmentally sustainable community within the Shoreline Environmental Sustainability Strategy.
- To evaluate Utility rates and project surface water management fees for the next five years to ensure the continued financial viability of the Utility.

Additional information pertaining to the SWMP is provided Section 3.4 of this DEIS.



# 2.5.10 Shoreline Climate Action Plan

The Shoreline Climate Action Plan was adopted in September 2013, building on the City's commitment to environmental sustainability. Environmental sustainability has been a core value in Shoreline since the City's incorporation in 1995, and Shoreline has become a regional and national leader in sustainability and climate protection, adopting bold policies and implementing numerous ambitious projects in recent years. Climate Action Plan goals include:

- 1. Communicate to the community what the City has already done and quantify the benefits of those actions.
- 2. Establish specific GHG emissions reduction targets and make recommendations for additional City actions to help achieve them.
- 3. Inform the community about what residents and businesses can do to address climate change.

Ultimately, the Shoreline Climate Action Plan strives to provide the important steps that City officials and staff, as well as Shoreline residents and businesses, can take to reduce greenhouse gas emissions and protect our abundant northwest environment, as part of the global effort to address climate change.

# 2.5.11 Shoreline Environmental Sustainability Strategy

A precursor to the Climate Action Plan, the Environmental Sustainability Strategy, adopted in 2008, includes the following mission statement:

The City of Shoreline will exemplify and encourage sustainable practices in our operations and in our community by:

- Being stewards of our community's natural resources and environmental assets;
- Promoting development of a green infrastructure for the Shoreline community;
- Measurably reducing waste, energy and resource consumption, carbon emissions, and the use of toxics in City operations; and
- Providing tools and leadership to empower our community to work towards sustainable goals in their businesses and households.

The strategy conveys ten guiding principles:

- 1. Sustainability will be a key factor in policy development.
- 2. The City will lead by example and learn from others.
- 3. Environmental quality, economic vitality, human health, and social benefit are interrelated systems.
- 4. Community education, participation, and responsibility are key elements.



- 5. Commitment to continuous improvement—the City will apply adaptive management to its efforts and clearly communicate findings.
- 6. Manage expected growth in a sustainable way.
- 7. Address impacts of past practices.
- 8. Proactively manage and protect ecosystems.
- 9. Improve and expand waste reduction and resource conservation programs.
- 10. Energy solutions are key to reducing our carbon footprint.

# 2.5.12 Economic Development Strategic

# Plan

The Economic Development Strategic Plan guides economic development strategy for the period of 2012 through 2017. Through a collaborative process, the Economic Development Strategic Plan concluded that the goal of economic development in Shoreline is captured by the concept of "placemaking" (see box this page). Through placemaking, projects can be accomplished that realize the following six guidelines for sustainable economic growth:

- Multiple areas—improvements and events throughout the city that attract investment
- Revenue—growing revenue sources that support City programs
- Jobs—employers and business starts that create more and better jobs

- Vertical growth—sustainable multi-story buildings that efficiently enhance neighborhoods
- Exports—vibrant activities and businesses that bring money into Shoreline
- Collaboration—broad-based partnerships that benefit all participants

The plan recognizes the light rail station areas as two imminent and crucial opportunities.

# Placemaking...

"turns a City from a place you can't wait to get through into a place you never want to leave." Fred Kent

# 2.5.13 Southeast Neighborhoods Subarea Plan

The Southeast Neighborhoods Subarea is bounded on the south by NE 145<sup>th</sup> Street, on the west by 8<sup>th</sup> Avenue NE, on the north by NE 155<sup>th</sup> and NE 150<sup>th</sup> Streets, and on the east by Bothell Way. The subarea contains portions of both the Ridgecrest and Briarcrest neighborhoods, comprised predominately of singlefamily households, most of which were constructed after WWII.

The Southeast Neighborhoods Subarea Plan was adopted in May 2010, several years before the preferred location for the 145<sup>th</sup> Street light rail station was identified, but makes reference to a potential future light rail stop in the subarea. Updated land use

designations were adopted in the subarea, allowing more medium and high density residential as well as mixed use and community business.

When it was annexed, most of the subarea was not assigned Comprehensive Plan designations, but given the place-holder "Special Study Area." The City of Shoreline worked with a Citizens Advisory Committee from July of 2008 until November of 2009 to create a vision and craft policy and zoning recommendations. This subarea plan is a condensed version of their report.

The plan is intended to provide direction through 2030 and recognizes that many changes are expected in that time period with implementation of the light rail station, progress in new transportation technologies, and changing preferences for housing, neighborhood design and amenities. A key objective will be retaining the character of the subarea and natural areas while accommodating these changes. While change may be inevitable, it can be channeled to provide amenities and improvements and prevented from negatively affecting the quality of life that is why people choose to live in this part of Shoreline.

Policies pertaining to Natural Environment; Land Use; Housing; Transportation; Parks, Recreation, and Open Space; Economic Development; and Community Design are relevant to the 145<sup>th</sup> Street Station Subarea Plan and are summarized below.

#### **Natural Environment**

Goal: To provide a healthy and flourishing natural environment for the benefit of both human and wildlife residents, utilizing innovative technology and conservation measures. The community identified a number of natural characteristics that enhanced the quality of life in the neighborhood and were highly valued. These included the extensive tree canopy, vegetative cover, and prevalent wildlife, notably the varied list of bird species. They also acknowledged other existing, natural conditions that could pose problems in the process of development or redevelopment. These included the high groundwater table, poor soil conditions and infiltration rates that exist on some sites.

Policy Recommendations:

NE1: Create incentives to encourage the use of innovative methods of protecting natural resources (solar power for lighting outside space, green storm water conveyance systems, new recycling options).

NE2: Create incentives to encourage innovative strategies to enhance the natural environment on and around developed sites (green roof and green wall techniques, hedgerow buffers, contiguous green zones through neighborhoods, green storm water conveyance systems).

NE3: When redeveloping a site, encourage incorporation of measures that improve or complement the community's natural assets such as its tree canopy, surface water elements, wildlife habitat, and open space.

NE4: Link green open spaces within subarea and then link them to those outside subarea to create trails.



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NE5: Support creation of contiguous ecosystems, with attention to wildlife habitat, through development of a "green corridor," as a public/private partnership, including the area between Seattle's Jackson Park, Paramount Park, and Hamlin Park.

NE6: Protect and renew ("daylight") streams in the area.

NE7: Create incentives to encourage enhancement and restoration of wildlife habitat on both public and private property through existing programs such as the backyard wildlife habitat stewardship certification program.

NE8: Use green street designs in south Briarcrest to provide more green space for residents in that area and to link residents to an east-west trail that connects the area to other trails such as the Interurban Trail.

NE9: Develop technical resources for better understanding of overall hydrology, including the locations of covered streams in the subarea, and recommend actions and measures to address existing stormwater drainage problems.

NE10: Create incentives to plan all remodel and new development around substantial trees and groves of trees to preserve tree canopy.

NE11: Retain and establish new trees, open spaces, and green belts.

NE12: Use green buffers of specific buffer area to building height ratio between different land uses, especially where transition zoning is not possible.

#### Land Use

Goal: To promote smart growth, enhancement of local businesses and amenities, connectivity and transition between uses, and compatibility between potential development and the established residential character of the neighborhoods.

Because the central Puget Sound region is a desirable place to live, its population is expected to grow over the next twenty years. Shoreline, due to its location and amenities, is likely to grow as well. In general, the plan preserves the single-family character of the neighborhoods. However, a major focus of the plan is to increase housing choice by encouraging styles of "appropriate" infill development, such as Accessory Dwelling Units and small houses on small lots, rather than zoning large areas for higher density. This way, growth is diffused throughout the area, has minimal visual impact on neighboring houses, and provides extra living space for extended families or rental income. In addition to encouraging infill development, the subarea plan identifies a few areas where access to transit, business corridors, and park amenities would allow multifamily homes and create areas with commercial and residential uses. To create a transition between single family areas and mixed-use commercial areas, the plan provides for stepping down in zoning intensity from the areas designated for higher density or mixed-use to the singlefamily core of the neighborhood.

#### Policy Recommendations:

LU1: Promote the analysis of impacts to the full range of systems as part of the planning and development process.



LU2: Create incentives to use vegetated buffers between types of land use, in addition to transition zoning or open space.

LU3: Development, as defined in the Comprehensive Plan, should be approached from the perspective of innovative options for increasing density.

LU4: Establish policies and zoning to provide appropriate transitions between existing and proposed development and dissimilar land uses to minimize conflicts relating to solar access, noise, scale, etc.

LU5: Place highest-density housing (mixed-use) on transit lines or in already established commercial zones.

LU6: After updated regulations governing new development and redevelopment have been established, revisit the rules on a regularly scheduled basis for the purpose of enhancing the rules that work and eliminating those that don't work.

LU7: Consider establishing a neighborhood business zone that would be restricted to non-residential uses, or some other solution to the problem of retail development being overlooked when residential development on the site yields more profit.

LU8: Establish metrics, targets, baselines and a reporting timeframe to measure progress of social, economic and natural capital when evaluating Comprehensive Plan completeness.

LU9: As the housing market and transportation technologies evolve to support more options, establish zoning designations for

areas that may be appropriate for car-free zones or reduced parking standards.

LU10: Quality of life for current residents in the subarea should be considered in decision-making processes that involve new development in the community, even though decisions must also take into account overall land use goals and the economic needs of the City as a whole.

#### Housing

Goal: To promote housing diversity, affordability and adaptability while respecting and maintaining the identified single-family character of the neighborhoods.

Very few large tracts of raw land remain in the subarea, so most expected growth will occur as infill and/or redevelopment. Given that these options include a wide spectrum of styles and quality, how this housing would fit with the surrounding community posed one of the greatest challenges. Through a visual preference survey, a number of infill development concepts were identified as having good potential for being compatible with the existing neighborhood character. These include: Accessory Dwelling Units (ADU), small houses on small lots, cluster development, duplexes on corner lots, etc. Again, it is important to note that these were identified prior to the light rail station subarea planning process, which has confirmed community interest in more multifamily housing choices (including affordable housing options) and mixed use transit-oriented development in the station subarea.

Policy Recommendations:



H1: Recognize and continue the area's history of providing affordable yet diverse housing to a variety of residents across the income spectrum.

H2: New housing development that is added in the center of established neighborhoods of the SE Subarea should be consistent with neighborhood character. Lot size to structure ratios and the scale of building are important.

H3: Distribute low-income housing so that it is not all in one place in the neighborhood, prohibiting the development of large, lowincome housing groups or units.

H4: Increase housing stock that attracts new residents by appealing to a diversity of buyers' and renters' interests, including:

- Energy efficiency
- Parking options
- Density/size/FAR
- Private/shared outdoor open space
- Affordable/quality/sustainable building materials and construction practices
- Multi-family/multi-generational/single family housing options
- Accessory Dwelling Units
- Adaptability

H5: Because existing housing tends to be more affordable than new construction, remodeling and refurbishing current stock should be encouraged over demolition and redevelopment. H6: Review existing policies and City code on Accessory Dwelling Units and home businesses to promote low-impact density.

H7: Adopt regulations that would allow "cottage style" housing without compromising quality.

H8: Encourage "green" building through incentives, fees and /or tax policies.

H9: Encourage partnerships with non-profit affordable housing providers, land trusts, Community Development Corporations and other organizations whose mission involves increasing the stock of affordable housing.

It is important to note that the current station subarea planning process proposes updated land use alternatives surrounding the light rail station in accordance with Comprehensive Plan policies adopted in 2012, after the 2010 adoption of the Southeast Neighborhoods Subarea Plan. The land use alternatives studied in this DEIS call for multifamily housing and mixed use transitoriented development in the vicinity of the planned light rail station.

### Transportation

Goal: To promote connectivity, safety, alternative transportation and walkability throughout the subarea's roadways and trail systems.

This subarea faces a number of problems similar to those of other neighborhoods. The subarea plan focused on improvements to

traffic safety, road treatments, and pedestrian and bicycle networks within the City's boundaries and purview.

Policy Recommendations:

T1: Encourage "walkable" and "bikeable" neighborhoods and intra-area connections through incorporation of safe pedestrian and bicycle corridors.

T2: Retain, improve, and expand public transit.

T3: Increase local transit service to economic hubs and schools (in addition to service to downtown Seattle) that focuses on east/west connections.

T4: Improve automobile traffic flow on major arterial corridors to accommodate increased density.

T5: Implement traffic calming measures on priority local streets between 145th and 150th Streets, as well as other local roadways to improve safety and reduce cut through traffic.

T6: Implement improvements along 15th Ave. to revitalize business, increase pedestrian and bicycle safety and usability, and add vehicle capacity where necessary.

T7: Work with neighbors to complete more "green street" type projects that will "complete" the street right of way and add pedestrian ways without adding curb-gutter and sidewalk.

T8: Add bus shelters at busy stops.

T9: As part of potential redevelopment of the commercial area on Bothell Way, address the east/west access issues to promote neighborhood connectivity to businesses, while protecting the residential neighborhood from cut-thru traffic.

T10: As part of the update of the Transportation Master Plan, also consider smaller, innovative solutions to reducing automobile dependence, such as circulator busses, carsharing, bike rentals, etc.

T11: Encourage the City to work with Seattle, King County, Sound Transit, and WSDOT to undertake a corridor study on 145th St. that would result in a plan for the corridor to improve safety, efficiency, and modality for all users. This plan should include adjacent neighborhoods in the process, and should have a proposed funding strategy for implementation.

Consistent with the policy above, the City is beginning the 145<sup>th</sup> Corridor Study process. Since the Southeast Neighborhoods Subarea Plan, the City also adopted a Transportation Master Plan update and this current station subarea planning process proposes updated transportation policies and mitigation measures.

#### Parks, Recreation, and Open Space

Goal: To preserve, protect and promote creation of public spaces that balance needs for human recreation, animal habitat, and natural vegetative growth.



The subarea contains or is adjacent to several of Shoreline's parks, including Hamlin, South Woods, and Paramount Park and Open Space.

Policy Recommendations:

PR1: Support development of a trail/designated pathway connecting the Interurban Trail and the Burke-Gilman Trail with Paramount Park (upper and lower), Hamlin Park, South Woods, and Seattle's Jackson Park.

PR2: Encourage development of sidewalks, footpaths, green streets, and signage on existing walkways near trail areas.

PR3: Use incentives to encourage development of more open/green space.

PR4: For larger-scale developments, establish a standard for proportional area of open space created or green space preserved.

PR5: Provide reasonable signage at main entrances to all parks. PR6: Redevelop paths in Paramount Open Space to ensure at least one year-round connection between the east and west sides of the Ridgecrest Neighborhood.

#### **Economic Development**

Goal: To promote development of businesses that serve needs of local residents, add to vibrancy and socially-oriented identity of neighborhoods, and provide jobs.

The neighborhood supports opportunities for establishment of local gathering places and nodes of business activity where needed goods and services are located within walking distance, and could provide employment opportunities for local residents. It should be noted that the mixed use transit-oriented development proposed in the station subarea would support these opportunities.

**Policy Recommendations:** 

ED1: Encourage the creation of community gathering places. Create nodes (indoor & outdoor) for gathering and social interaction.

ED2: Revitalize the local economy by encouraging new business that is beneficial to the community in terms of services, entertainment, and employment.

ED3: Increase small-scale economic development (e.g., retail, office, service) that employs local people and complements residential character.

ED4: Inventory and promote the SE Subarea resources and opportunities, such as redevelopment at Shorecrest, Public Health Labs, and Fircrest.

ED5: Encourage community groups to define specific types of commercial, retail and professional businesses to best serve needs of subarea residents.



ED6: Encourage home-based business within the parameters of the residential zoning to bolster employment without adverse impact to neighborhood character.

ED7: Attract neighborhood businesses with support from the Economic Development Advisory Committee that could be sustained by the community.

ED8: Continue active participation from the City and the neighboring community in determining most beneficial uses, practices, and mitigation in long-term plans for Fircrest.

ED9: Encourage staff to identify potential Capital Improvement Projects that support the adopted subarea plan vision for business areas in the southeast neighborhoods.

ED10: Modify commercial zoning regulations to require that mixed-use buildings be designed to accommodate ground level commercial uses along arterial street frontages.

### **Community Design**

Goal: To encourage well-planned design of systems and appropriate transitions between different uses so that positive impacts of growth are realized and negative impacts may be minimized.

The community wished to maintain a reputation of supporting a diverse population base and providing some of the City's most affordable housing options. Another priority was to retain green and open space so that a variety of wild flora and fauna would also continue to live in the neighborhood. There was widespread

support for a thriving business district and alternative forms of housing, as long as they were visually compatible with existing single-family homes. Concentrating on elements of design and transition and articulating standards could provide an effective method to bring the vision to fruition.

Policy Recommendations:

CD1: Development regulations applicable to the SE Subarea should be predictable and clear, written in a manner that reduces uncertainty for developers, City staff, and the community.

CD2: Development & Land Use designs and patterns should contribute to the vitality of the area as a whole, serving the broader community and immediately adjacent neighbors, using compatibility criteria and incentives to be determined.

CD3: Encourage planning of local "hubs" for provision of services and gathering places.

CD4: Support development of a plan to implement a network of "feeder" pathways/trails (may also be in the form of green streets) to connect neighborhoods to larger, city-wide walkways (such as a potential trail connecting Interurban, Hamlin, South Woods and Burke-Gilman) and to encourage walkable neighborhoods.

CD5: Encourage redevelopment and revitalization of existing infrastructure (schools, businesses, single and multi-family structures) by providing incentives.



CD6: Community design should be pedestrian-oriented with incentives for development and redevelopment to open new or enhance existing pedestrian access and green spaces.

CD7: Establish rules and incentives that ensure developments are planned in ways that are consistent with the communities' vision of three-pronged sustainability (economic, environmental and social equity).

CD8: Establish density and zoning regulations and design review processes that are flexible enough to allow for creativity in design, but restrictive enough to ensure the protection of the community, especially the immediately adjacent neighbors.

CD9: Use medium- to low-density, multi-family units as transitional areas from high density residential or commercial properties to single-family homes.

CD10: Modify the existing R-48 transition regulations to permit a 50 foot height limit (60 feet through a conditional use process) only if the subject site is adjacent to R-24 or R-48 residential zones or commercial zones and not adjacent to residential zones with a density less than R-24.

CD11: Take advantage of city, state, and federal pilot projects whose focus is improvement of the environmental health of the community, such as green streets, innovative housing designs, alternative power generation, etc.

CD12: Establish rules and incentives that ensure actions occur in a manner that is consistent with the community's vision, while still promoting and providing incentives for redevelopment.

CD13: Improve the area around 145th St. and 15th Ave. with place-making treatments, such as lighting, benches, and landscaping, to identify it as a gateway to the City.

CD14: Work with community groups, neighborhoods and outside experts to promote "community gardens" for production of food and recreation.

Again, it is important to note that this current station subarea planning process is taking an updated look at community design policies and Code regulations needed to support the proposed plan for transit-oriented development in the vicinity of the planned light rail station.

# 2.5.14 Aurora Square Community Renewal Area Planned Action

The City of Shoreline has developed a plan for the Aurora Square Community Renewal Area, which is a shopping district built in the 1960s at the crossroads of Aurora Avenue N and N 155<sup>th</sup> Street. Although this area is outside the subarea, it is within the retail service area of existing and future residents of the subarea. The 70-acre site was designated as a Community Renewal Area (CRA) by Shoreline City Council, recognizing that economic renewal would deliver multifaceted public benefits. A Renewal Plan for the CRA was developed in 2013 and calls for several key actions as part of redevelopment and revitalization of the area. More aspects of this plan are summarized in Chapter 2, but the key opportunity related to the station subarea is proximity and access to the shopping center (in its current form as well as to potential future new uses there) via N-NE 155<sup>th</sup> Street. Public amenities and infrastructure redevelopment at Aurora Square could be resources for future station subarea residents. For example, a grand public space is envisioned with redevelopment of the shopping center, which could become an important destination for subarea residents. Also the CRA plan calls for implementation of district energy and eco-district solutions. Infrastructure in N-NE 145<sup>th</sup> Street and/or N-NE 155<sup>th</sup> Street built for district energy conveyance could possibly be designed to extend to future customers in the station subarea. Good multimodal connections between Aurora Square and the station subarea will be important as planning, design, and implementation of redevelopment projects proceed. More information about the plan can be found at: <a href="http://www.cityofshoreline.com/business/aurora-square-community-renewal-area">http://www.cityofshoreline.com/business/aurora-square-community-renewal-area</a>.

# **2.5.15 Development Regulations**

The City manages development through provisions of the Shoreline Municipal Code (SMC) and Title 20 of the SMC, the Development Code. Applicable sections of the code include the following.

## Shoreline Municipal Code Provisions

The Shoreline Municipal Code is a continuously evolving document made up of ordinances adopted by the City Council. These ordinances set standards to maintain safety and protect quality of life in Shoreline. The Municipal Code includes various titled sections including:

Title 1 General Provisions—describes the process of codification and amendments.

- Title 2 Administration—describes the municipal government roles of City Manager, Planning Commission, and various boards
- Title 3Revenue and Finance—presents the financial<br/>structure of the City
- Title 4 Reserved—not used at this time
- Title 5 Business Licenses and Regulations—describes required licenses for various businesses/operations
- Title 6 Animal Control Regulations
- Title 7 Reserved—not used at this time
- Title 8Health and Safety—consumer protectionprovisions and City park use rules
- Title 9 Public Peace, Morals, and Welfare—public disturbance noise, criminal code, fireworks, and other provisions
- Title 10Vehicles and Traffic—traffic and vehicle related<br/>provisions, speed limits, restricted parking zones
- Title 11 Reserved—not used at this time
- Title 12 Streets, Sidewalks, and Public Places—sidewalk maintenance, roads and bridges, use of right-ofway, street vacation, public tree management
- Title 13Utilities—provisions related to water and sewersystems, surface water utility, floodplain



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management, solid waste, electricity and communications

- Title 14 Environment—commute trip reduction plan provisions
- Title 15 Buildings and Construction—references construction and building codes, fire code, energy management code, and landmarks preservation
- Title 16 Land Use and Development-planning provisions many of which have been repealed and incorporated into other areas of the Municipal Code, Shoreline Management Plan, land use and development fee schedule
- Title 17 Subdivisions—repealed and now incorporated into Title 20, Development Code
- Title 18Zoning—repealed and now incorporated intoTitle 20, Development Code
- Title 19 Reserved—not used at this time
- Title 20 Development Code—provisions related to plan requirements, zoning, special districts, and other development requirements, including general development standards.

## Title 20—Development Code—Existing Provisions

The Development Code includes requirements, standards, and guidelines for zoning and development, including private and public facilities. The purpose of the Development Code is to:

- Promote the public health, safety, and general welfare;
- Guide the development of the city consistent with the Comprehensive Plan;
- Carry out the goals and policies of the Comprehensive Plan by the provisions specified in the Code;
- Provide regulations and standards that lessen congestion on the streets;
- Encourage high standards of development;
- Prevent the overcrowding of land;
- Provide adequate light and air;
- Facilitate adequate provisions for transportation, utilities, schools, parks, and other public needs;
- Encourage productive and enjoyable harmony between humans and the environment;
- Promote efforts that will prevent or eliminate damage to the environment and biosphere;
- Protect the functions and values of ecological systems and natural resources important to the public; and
- Encourage attractive, quality construction to enhance City beautification.

The Development Code's regulations guide land use, building location and height, parking, landscaping, urban design, environmental protection, infrastructure, and historic preservation, as well as other elements. Development Code sections include:

• 20.10 General Provisions

### **Draft Environmental Impact Statement**



- 20.20 Definitions
- 20.30 Procedures and Administration
- 20.40 Zoning and Use Provisions
- 20.50 General Development Standards
- 20.60 Adequacy of Public Facilities
- 20.70 Engineering and Utilities Development Standards
- 20.80 Critical Areas
- 20.93 Aldercrest—Planned Area—not applicable to the subarea
- 20.100 Special Districts—not applicable to the subarea

Division II. Shoreline Master Plan (20.200, 20.210, 20.220, and 20.230 provisions) –not applicable to the subarea

## Existing Zoning Designations within and in Proximity to the Subarea

- R-6, Residential, 6 dwelling units per acre (single family)
- R-8, Residential, 8 dwelling units per acre (single family)
- R-12, Residential, 12 dwelling units per acre (single family, duplex, townhouses, cluster)
- R-18, Residential, 18 dwelling units per acre (multifamily, townhouses, apartments)
- R-24, Residential, 24 dwelling units per acre (multifamily, townhouses, apartments)
- R-48, Residential, 48 dwelling units per acre (multifamily, apartments)

- CB—Community Business (mixed use, apartments, retail and personal services)
- MB—Mixed Business (vertical or horizontal mixed use)
- NB—Neighborhood Business
- Campus

The City's zoning map also identifies areas in use for parks and utilities.

Amendments to City of Shoreline development regulations are being prepared to support implementation of the subarea plan. The regulations specify requirements for the new zoning categories and include new provisions not be currently covered in the existing Municipal and Development Codes. The new regulations will be adopted as part of the subarea plan and planned action, and integrated into City codes as needed to support implementation. These include provisions for building height, bulk, character/form, setbacks, transitions between land uses, surface coverages, parking ratios, and other requirements. Development Code revisions include new and unique regulations to implement the City's vision for the subarea. For information pertaining to the relationship of the DEIS alternatives to the Development Code, including Code revisions to support the proposed planned action, refer to Chapter 3, Section 3.1 Land Use Patterns.

# Chapter 3

Affected Environment, Analysis of Potential Impacts, and Mitigation Measures DRAFT ENVIRONMENTAL IMPACT STATEMENT



# Chapter 3—Affected Environment, Analysis of Potential Impacts, and Mitigation Measures

# **3.1 Land Use Patterns, Plans, and Policies**

This section describes the affected environment, analyzes potential impacts, and provides recommendations for mitigation measures for land use patterns, plans, and policies. Information about the resulting community character associated with the alternatives also is presented.

# **3.1.1 Affected Environment**

The analysis of the affected area was completed based on field work in the subarea, as well as review of existing data and information, such as the City of Shoreline Comprehensive Plan and other plans such as the City's adopted Transportation Master Plan, Southeast Neighborhoods Subarea Plan, and other plans and documents. Applicable elements of the City's Municipal and Development Codes and their relationship to potential action under the subarea plan also have been reviewed.

# Station Subarea Context

For development of the 145th Street Station Subarea Plan and environmental analysis purposes, the City of Shoreline Planning Commission determined study area boundaries for land use and mobility with consideration of factors such as topography, the ability to walk and bike to and from the station, policy direction from Shoreline City Council, access to arterial streets, opportunity sites, environmental assets, and other existing conditions and influences. **Figure 3.1-1** illustrates the two study areas that together comprise the subarea. While this is the focus area for station subarea planning, land use alternatives may extend beyond this area for analysis.

The subarea includes portions of the Parkwood, Ridgecrest, and Briarcrest neighborhoods of Shoreline. Bordering areas include the City of Seattle to the south, and incorporated areas of Shoreline to the north, west, and east. The City of Lake Forest Park is located to the east of the subarea.

N-NE 145<sup>th</sup> Street is the most prominent corridor in the subarea, also functioning as State Route (SR) 523 and the boundary between the City of Seattle and the City of Shoreline. Currently, Seattle owns the eastbound lane, King County owns the westbound lane, and Shoreline begins at the back edge of the sidewalk.

The subarea generally extends approximately one-half mile north of the 145<sup>th</sup> corridor, with the western boundary at Meridian Avenue N and the northern boundary at N-NE 155<sup>th</sup> Street. Alternative 2—Connecting Corridors extends beyond these streets, west to the Aurora Avenue N corridor and north to N-NE 165<sup>th</sup> Street. This reflects a concept raised during community workshops that in addition to N-NE 145<sup>th</sup> Street, 5<sup>th</sup> Avenue NE or N-NE 155<sup>th</sup> Street could potentially serve as strong connecting corridors in the subarea, lined with mixed use (shops and services at the ground floor with housing above).

Alternatively, the idea of concentrating density in a more compact form around the planned light rail station was another concept that came out of the community workshop sessions. Alternative 3—Compact Community reflects this approach.

Many participants in the community workshops were interested in improving pedestrian and bicycle connectivity throughout the subarea, as well as enhancing parks, open space, streams, wetlands, and other natural resources. This concept is reflected in the Green Network that is included in both action alternatives.

Another idea that shaped development of the Green Network was an expressed interest in arranging new redevelopment and housing around key park and open space assets in the subarea. The analogy used to describe this idea was that if parks are the jewels of the neighborhoods, the Green Network could connect them like the chain in a necklace. Denser areas near parks are reflected in both action alternatives, Alternative 2—Connecting Corridors, and Alternative 3—Compact Community.

# Traffic Analysis Zones Used for Planning and Analysis

For purposes of population, housing, and employment projections and transportation planning, traffic analysis zone (TAZ) boundaries in proximity to the subarea also have been referenced in this analysis. Because TAZ boundaries align with census tract boundaries, they are commonly used for planning and analysis purposes. Refer to Section 3.2 Population, Housing, and Employment and Section 3.3 Multimodal Transportation for additional information and a map of the TAZ boundaries.

# Proposed Sound Transit Light Rail Station Facilities

Through a separate environmental process, Sound Transit identified the potential light rail station location. The preferred option for the station location is just to the north of NE 145<sup>th</sup> Street on the east side of and immediately adjacent to the Interstate 5 (I-5) corridor. A park-and-ride structure, also to be constructed by Sound Transit, potentially would be located also on the east side of I-5, just to the north of the light rail station.

The City of Shoreline supports the station location proposed by Sound Transit, and identifies the location in the City's Comprehensive Plan Land Use Map. **Figures 3.1-2a** through **3.1-2d** show exhibits from the Lynnwood Link DEIS (published by Sound Transit and the Federal Transit Administration in July 2013). These figures show conceptual level plans and cross section view of the potential 145<sup>th</sup> Street Station and park-andride structure.

A second potential Sound Transit light rail station in Shoreline is planned to be located immediately north of NE 185<sup>th</sup> Street, adjacent to the east side of I-5. The primary connecting routes between the 145<sup>th</sup> and 185<sup>th</sup> light rail station subareas include the north-south corridors of 5<sup>th</sup> Avenue NE , 8<sup>th</sup> Avenue NE, 10<sup>th</sup> Avenue NE, and 15<sup>th</sup> Avenue NE.





# Past and Present Land Use Patterns in the Subarea

Past and present land use patterns in the subarea are described below and on the following pages, including a summary of the history of settlement of the general community of Shoreline.

## History and Settlement of the Area

Early accounts of Shoreline tell how Native Americans traveled along the shores of Puget Sound and local streams collecting swordfern and kinnikinnick at Richmond Beach, and wild cranberries at what are now Ronald Bog and Twin Ponds parks. Controlled fires were set in the Richmond Highlands and North City areas to create meadows for the cultivation of certain wild plants and to provide inviting, open spaces for small game.

In the 1880s, the US Government opened the region to homesteading after railroad fever gripped the Northwest. Speculators planned towns in anticipation of the transcontinental railroad route. Among these was Richmond Beach, platted in 1890. The arrival of the Great Northern Railroad in Richmond Beach in 1891 spurred the growth of the small town and increased the pace of development in the wooded uplands.

Construction of the Seattle to Everett Interurban trolley line through Shoreline in 1906, and the paving of the North Trunk Road with bricks in 1913, made travel to and from Shoreline easier, increasing suburban growth. People could live on a large lot, raise much of their own food and still be able to take the Interurban, train, or (beginning in 1914) the bus to work or high school in Seattle. Children could attend one of two local elementary schools, and general stores provided most of the goods that could not be grown at home. Local produce from fruit orchards, chicken farms, and strawberry crops was transported via the Interurban or the train. The Fish family's Queen City Poultry Ranch on Greenwood at 159th was a prosperous chicken farm that attracted many visitors. Ronald Station along the trolley line was located near present-day Park at Town Center.

During the early twentieth century, Shoreline attracted large developments drawn by its rural yet accessible location, including the Highlands and Seattle Golf Club (circa 1908). The Firland Tuberculosis Sanitarium (circa 1911), which is now Crista Ministries, also developed during that era. Commercial centers formed around Interurban stops at Ronald (175th Street and Aurora Avenue N) and Richmond Highlands (185th Street and Aurora Avenue N). Car travel facilitated settlement, which increased considerably by the mid-1920s. Although large tracts of land were divided into smaller lots in the 1910s in anticipation of future development, houses were still scattered.

A precursor to Interstate 5, Highway 99 was constructed to stretch from Mexico to Canada, offering more convenient access than ever before to America's new auto travelers. Originally known as the Pacific Highway, but later named Aurora Speedway and Aurora Avenue, there are conflicting histories of the source of the name "Aurora." Some say the name was meant to honor Aurora, Illinois, the hometown of Dr. Edward Kilbourne, a Fremont founder. Others say the name recognized the highway as a route north, toward the Aurora Borealis. Regardless of how the highway got its name, it changed the face of the area north of Seattle forever, and as more people took to the road in automobiles, there was less use of the old trolley line. The Interurban made its last run in February of 1939. By the late 1930s and early 1940s, commercial development concentrated along Aurora Avenue, which saw steadily increasing use as part of the region's primary north-south travel route. Traffic on 99 swelled, particularly after the closing of the Interurban.

The Great Depression and World War II (1930-1945) slowed the pace of development. Many Shoreline families managed to live off land they had purchased in better times. During World War II, building materials were rationed and housing construction virtually stopped. The only major development in Shoreline during the war was the Naval Hospital (now Fircrest). At its peak in 1945, the hospital housed over 2,000 patients and 600 staff.

With the end of the war came a substantial demand for family housing. The late 1940s saw large housing developments such as Ridgecrest (NE 165th to 155<sup>th</sup> Streets, 5th to 10<sup>th</sup> Avenues NE) spring up seemingly overnight. Schools ran on double shifts as families with young children moved into the new homes. In the late 1940s, business leaders and residents began to see Shoreline as a unified region rather than scattered settlements concentrated at Interurban stops and railroad accesses.

In 1944, the name "Shoreline" was used for the first time to describe the school district. Coined by a student at the Lake City Elementary School, it defined a community that went from the Seattle city line to Snohomish county line and from the shore of Puget Sound to the shore of Lake Washington.

Shoreline continued to grow, becoming an attractive place to live in the central Puget Sound region due to the great neighborhoods, schools, parks, and other community features. After it became clear that an additional north-south freeway would be needed to handle the cross-state traffic, Interstate 5 was constructed in the 1960s, with the final segment in Washington state opening on May 14, 1969. With its opening, motorists could travel without stopping from the northern California state line to the Canadian border, and Highway 99 became more of a regional route and alternate travel way to Interstate 5. The Interstate 5 corridor bisected the community that had become known as Shoreline, and made east-west travel on local roads more difficult.

Although known as "Shoreline" for decades, the community did not become officially incorporated city until 1995, and prior to that it remained an unincorporated area of King County north of Seattle. Today with 54,790 residents (2013 population), Shoreline is Washington's 15th largest city.

## **City of Shoreline Historic Preservation Program**

The Shoreline community has an interesting historical background, as summarized. Recognizing this history and the potential for important historical and cultural resources that warrant preservation, the City of Shoreline administers a historic preservation program.

Historic preservation in Shoreline is guided by the Community Design Element Goal CD IV and policies CD38 through CD45 in the Comprehensive Plan, as well as adopted provisions of Title 15.20 of the Shoreline Municipal Code. The preface and purposes of Title 15.20 based on City Council findings are described as follows.



- A. The protection, enhancement, perpetuation, and use of buildings, sites, districts, structures and objects of historical, cultural, architectural, engineering, geographic, ethnic and archeological significance located in the city of Shoreline are necessary for the prosperity, civic pride and general welfare of the residents of the city.
- B. Such cultural and historic resources are a significant part of the heritage, education and economic base of the city, and the economic, cultural and aesthetic well being of the city cannot be maintained or enhanced by disregarding its heritage and by allowing the unnecessary destruction or defacement of such resources.
- C. In the absence of an ordinance encouraging historic preservation and an active program to identify and protect buildings, sites and structures of historical and cultural interest, the City will be unable to ensure present and future generations of residents and visitors a genuine opportunity to appreciate and enjoy the city's heritage.
- D. The purposes of this chapter (15.20 Historic Preservation of the Shoreline Municipal Code) are to:
  - Designate, preserve, protect, enhance, and perpetuate those sites, buildings, districts, structures and objects which reflect significant elements of the city of Shoreline's, county's, state's and nation's cultural, aesthetic, social, economic, political, architectural, ethnic, archaeological, engineering, historic and other heritage;

- Redesignate two sites in the city of Shoreline, previously designated as historic landmarks by the King County historic preservation commission, as City of Shoreline historic landmarks (note: because neither of these two sites are in the station subarea, this provision is not applicable);
- 3. Foster civic pride in the beauty and accomplishments of the past;
- 4. Stabilize and improve the economic values and vitality of landmarks;
- 5. Protect and enhance the city's tourist industry by promoting heritage-related tourism;
- Promote the continued use, exhibition and interpretation of significant sites, districts, buildings, structures, and objects for the education, inspiration and welfare of the people of the City of Shoreline;
- Promote and continue incentives for ownership and utilization of landmarks;
- 8. Assist, encourage and provide incentives to public and private owners for preservation, restoration, rehabilitation and use of landmark buildings, sites, districts, structures and objects; and
- 9. Work cooperatively with other jurisdictions to identify, evaluate, and protect historic resources in furtherance of the purposes of this chapter.

Shoreline's Historic Inventory—In review of the historic inventory compiled by the City of Shoreline in 2013, there are five properties in proximity to the subarea noted as having the potential for eligibility for landmark designation (although not yet designated) as historic landmarks by Shoreline, which coordinated with the King County Landmarks Preservation Program. These five potentially eligible properties are all single family lots with houses and structures built from the period of 1908 to 1939. The inventory identifies one of the properties as the Sheppard Residence built in 1939; others are not identified and appear to be privately owned.

Properties included in the inventory that are potentially eligible for landmark designation may require historic review if alterations or demolition are proposed, but such changes are allowed to inventoried properties. More information about Shoreline history is available at the following websites/webpages:

- City of Shoreline Historic Preservation <u>http://www.cityofshoreline.com/government/departments/pla</u> <u>nning-community-development/planning-projects/historic-</u> <u>preservation</u>
- Shoreline Historical Museum
   <u>http://shorelinehistoricalmuseum.org/</u>
- King County Historic Preservation Program <u>http://www.kingcounty.gov/property/historic-preservation.aspx</u>
- 4Culture <a href="http://www.4culture.org/">http://www.4culture.org/</a>

## **Present-Day Land Use Patterns**

The subarea today consists primarily of single family neighborhoods zoned as R-6 (residential, six units per acre) and developed at an average density of 3.2 units per acre. In addition to single family residential uses, there are several churches, parks, schools, and school properties within and in proximity to the subarea. For example, just northeast of the subarea a large contiguous area of land contains Hamlin Park, Kellogg Middle School, Shorecrest High School, Washington State Public Health Lab, and Fircrest Campus, although these parcels are owned and operated by various agencies (see Key Opportunity Sites in the Subarea for more information).

Most of the neighborhoods in the subarea were developed as single-family housing in the decades following World War II, primarily from the mid- to late 1940s through the 1970s, when the area was part of unincorporated King County. When the neighborhoods were originally developed, street standards did not require sidewalks, and as such, most of the local streets today do not have sidewalks or bike lanes. Surface water management standards also were less intensive than they are today and as such, there are frequently drainage issues in the subarea. Stormwater facilities are generally below the standard now required by the Department of Ecology, and there are very few low impact development facilities such as rain gardens.

The City of Shoreline, incorporated in 1995, now has jurisdiction over this area and works with the community to prioritize capital transportation and infrastructure improvements throughout the city. Although some improvements have been made in the subarea in recent years, budget constraints have limited the level of street and utility improvements completed to date.



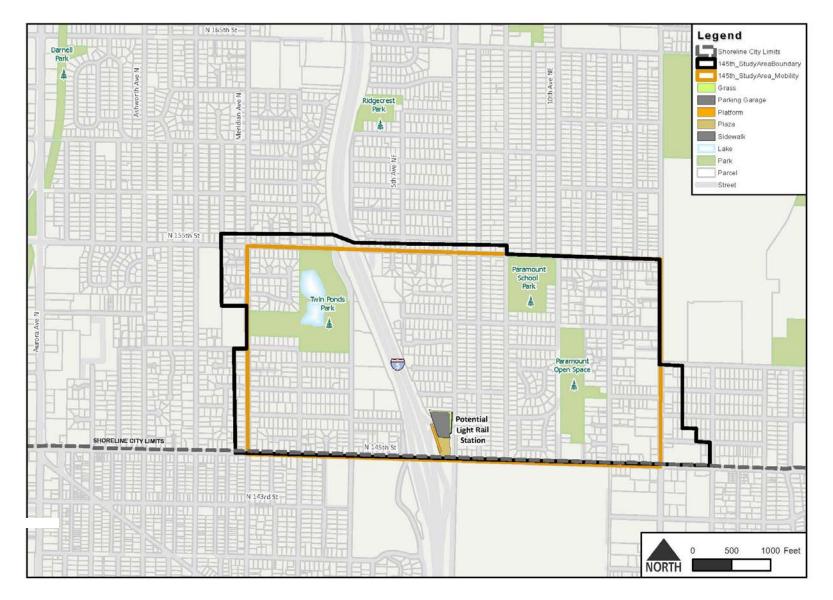
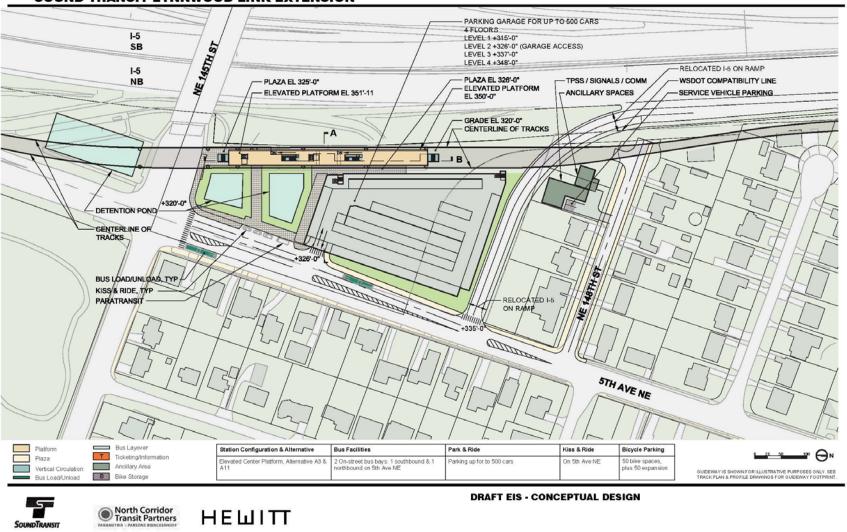


Figure 3.1-1 Land Use (Black) and Mobility (Gold) Study Area Boundaries, which Together Comprise the Subarea





#### SOUND TRANSIT LYNNWOOD LINK EXTENSION

Figure 3.1-2a Sound Transit's Conceptual Design Plan (Plan View) for the 145<sup>th</sup> Street Station (Source: Lynnwood Link Extension Draft Environmental Impact Statement, Sound Transit and Federal Transit Administration, July 2013)

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#### SOUND TRANSIT LYNNWOOD LINK EXTENSION

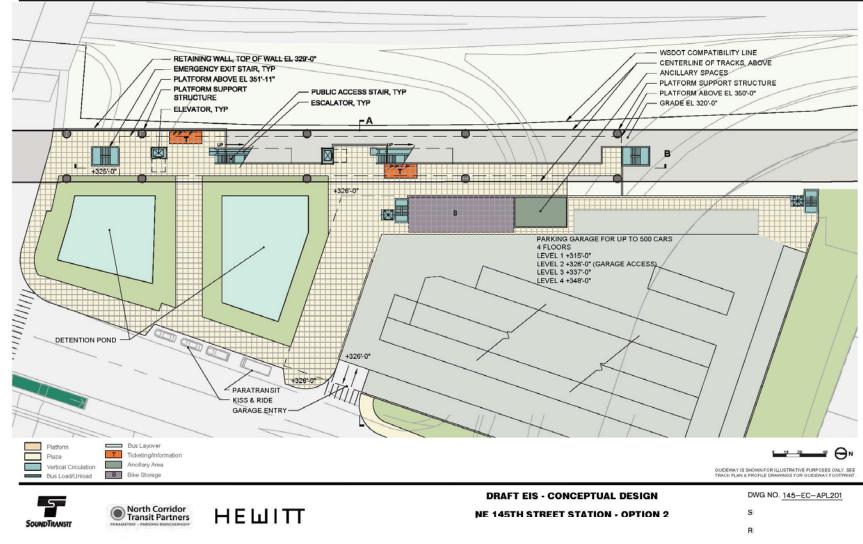


Figure 3.1-2b Sound Transit's Conceptual Design Plan (Enlarged Plan View) 101 Life 143 Surger Station (Source: Lynnwood Link Extension Draft Environmental Impact Statement, Sound Transit and Federal Transit Administration, July 2013)

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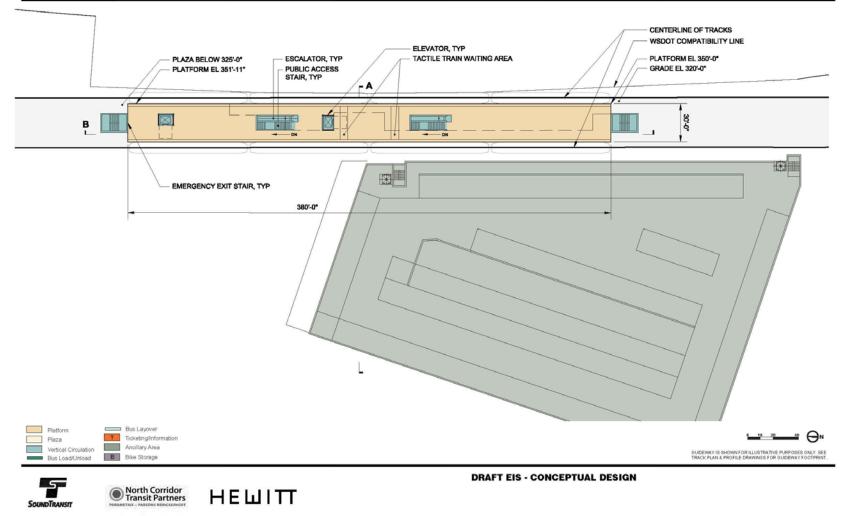


Figure 3.1-2c Sound Transit's Conceptual Design Plan (Platform Level Plan) for the 145<sup>th</sup> Street Station (Source: Lynnwood Link Extension Draft Environmental Impact Statement, Sound Transit and Federal Transit Administration, July 2013)



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SHORELINE

#### SOUND TRANSIT LYNNWOOD LINK EXTENSION

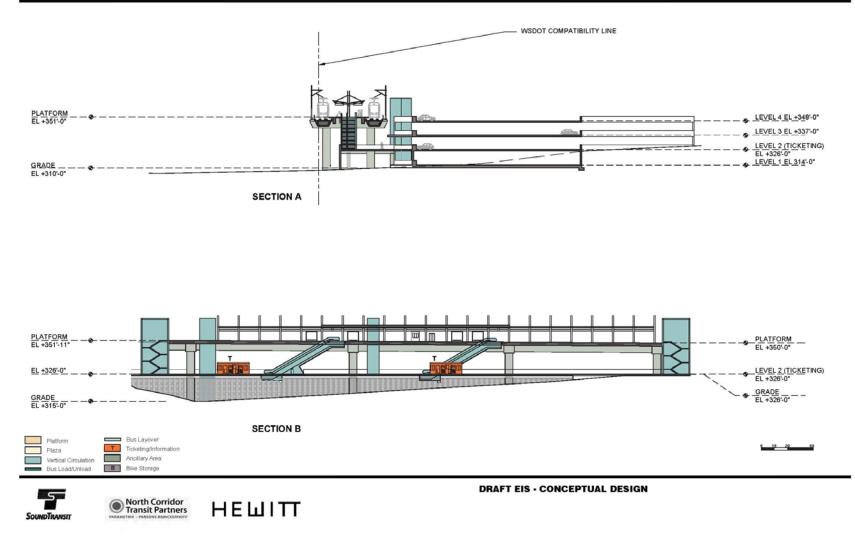


Figure 3.1-2d Sound Transit's Conceptual Design Plan (Cross Section Views) for the 145<sup>th</sup> Street Station (Source: Lynnwood Link Extension Draft Environmental Impact Statement, Sound Transit and Federal Transit Administration, July 2013)

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In the coming years, the City intends to leverage the regional investment made to implement light rail and prioritize improvements in the station subarea to serve proposed growth.

Growth and change over the past 50 years in the subarea has been minimal, limited to areas that are zoned to accommodate redevelopment into a mix of residential, commercial, retail, and office uses, such as 15th Avenue NE. Refer to Section 3.2 for a discussion of population, housing, and employment, including existing conditions, trends, and growth forecasts and targets. While the focus of planning is in the vicinity of the future light rail station, existing commercial/retail and multifamily land uses and zoning in proximity to the NE 145<sup>th</sup> Street and 15<sup>th</sup> Avenue NE intersection and along the 15<sup>th</sup> Avenue NE corridor are within the TAZ boundaries analyzed for population, housing, and employment.

# Current Neighborhoods in the Subarea

The subarea includes the following defined Shoreline neighborhoods:

- Parkwood
- Ridgecrest
- Briarcrest (Only a small portion of this neighborhood is within the subarea boundaries, specifically the parcels adjacent to the east of 15<sup>th</sup> Avenue NE.)

Other neighborhoods on the periphery of the subarea include Westminister Triangle, Meridian Park, and North City. **Figure 3.1-3** illustrates the neighborhood area boundaries in proximity to the subarea.

Shoreline's neighborhoods are very engaged in the community and maintain active neighborhood associations . Shoreline's Council of

Neighborhoods consists of two representatives from each of the neighborhood associations (including those listed above). The Council of Neighborhoods meets monthly to network, learn about other neighborhood happenings and meet with City representatives. This two-way communication allows neighborhood associations to provide community input and the City to present information on programs and projects. Brief descriptions, including historical information, for the three primary neighborhoods in proximity to the subarea follow.

**Parkwood Neighborhood**—Located at the southern edge of Shoreline, the Parkwood Neighborhood extends from N 160<sup>th</sup> Street to NE 145<sup>th</sup> Street, and from Aurora Avenue N to Interstate 5. Twin Ponds Park is a key feature of the neighborhood. Twin Ponds Park contains two ponds, recreational facilities, and a natural area with a stream that feeds Thornton Creek. Parkwood lies within the headwaters of the Thornton Creek watershed, a complex system of small streams and peat bogs, where wild cranberries were known to grow. Early accounts of the area mention how Native Americans would visit the area that is now Twin Ponds Park to collect the wild cranberries. The Interurban Trail crosses through the northwest corner of the neighborhood.

The Parkwood Neighborhood, like other neighborhoods of Shoreline, was primarily agriculture and forest with a few residential homes in the early 20<sup>th</sup> century. Businesses such as wood cutting, grocery, poultry, and fur animal husbandry took place. Extensive peat mining occurred in the Parkwood area as well. Eventually construction of roads such as North Trunk Road (now Aurora Avenue N) led to easier access between the neighborhood and Seattle, increasing the neighborhood's desirability.



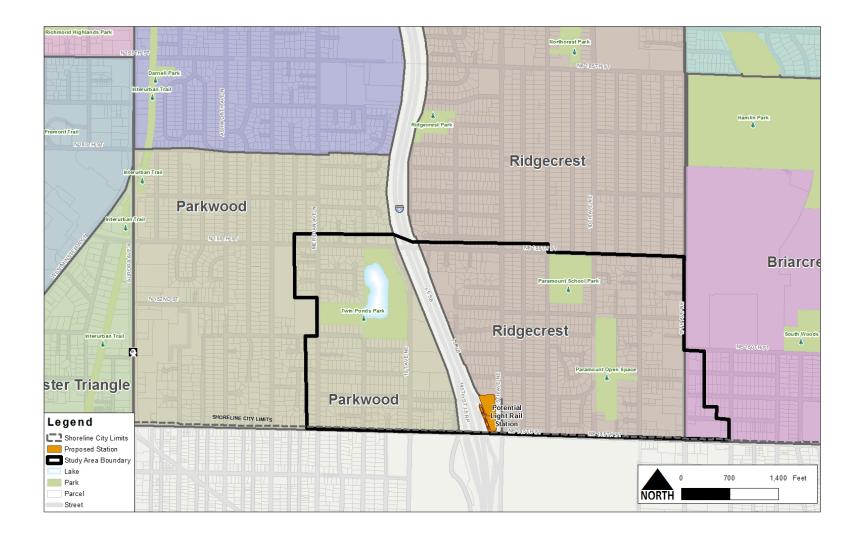


Figure 3.1-3 Existing Neighborhoods in the Vicinity of the 145th Street Station Subarea

The area saw steady increases in population until the Great Depression and during World War II, when housing development slowed. After the war was a different story as families began to migrate to homes in the suburbs. Developers such as the Western Land Company platted and built homes in the Parkwood area, and other neighborhoods in Shoreline, forming much of the land use character that is still visible today. The area's population boomed from the 1950s through the 1960s, drawn by its reputation as a great place to live with high quality schools and parks. Today, the predominant land use in Parkwood still consists of single family homes, with the exception of commercial uses along Aurora Avenue N, and public recreational facilities in Twin Ponds Park. In addition to single family homes, multifamily and assisted living residences also exist in the neighborhood. Parkwood's 2014 population was estimated to be 2,562.

Ridgecrest Neighborhood—Ridgecrest Neighborhood extends from I-5 east to 15th Ave NE, and from the southern boundary of NE 145<sup>th</sup> Street to the northern boundary of NE 175<sup>th</sup> Street. The planned light rail station and park-and-ride structure is located in this neighborhood.

The first major housing development in the neighborhood happened in the mid 1940s, near the end of World War II. Returning soldiers could purchase any one of the 100 houses that were built in 100 days. So many families with school age children moved to the neighborhood that the newly completed Ridgecrest Elementary School had to run double shifts. The majority of the single family housing stock was built in the late 1940s to early 1950s on large lots, set well back from the streets. Although some homes in this neighborhood were built earlier, including a log cabin built in 1933 from trees logged from the property that still stands today.

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neighborhood that is both multi-cultural and multi-generational. According to the 2010 US Census, Ridgecrest had 6,116 residents and 2,175 homes, making it one of the most populated neighborhoods in Shoreline. The neighborhood also has nine churches and four parks, as well as Shoreline's only theatre and skate park and the oldest operating 7-11 store in the State of Washington.

Briarcrest Neighborhood—Briarcrest Neighborhood is located in the southeast corner of the city, east of the Ridgecrest neighborhood, and extends to the eastern city limits, adjacent to Lake Forest Park. A large portion of Briarcrest was originally part of the Hamlin homestead acquired by the Hamlin family in 1895. The land was logged and farmed for decades. Much of the land of the original homestead was sold and developed. In 1939 Seattle Trust and Savings Bank donated 8 acres to King County, which became Hamlin Park. Hamlin Park is considered the oldest official park in the King County park system (but today is part of the City of Shoreline's park system). Over the years, the park was expanded through land dedications, and an area to the east was acquired by the Shoreline School District. Today, the 80-acre Hamlin Park contains ball fields, public art, picnic areas, and forest.

In addition to Hamlin Park, South Woods Park is another important open space in the neighborhood, consisting of a lowland forest with maintained trails, and pedestrian improvements. In addition to the two parks, predominant land uses within the neighborhood include single family residential homes, Shorecrest High School, Kellogg Middle School, and Acacia Cemetery.



#### Historic Photos of Shoreline and Subarea Vicinity







The historic image in the upper left, circa 1910, shows the old Interurban Streetcar line looking northwest. The image in the lower left, circa 1925, is the Edward Yenne Grocery store in Ridgecrest. The image in the upper right, circa 1922, is the Carlson Family in their potato field in the Parkwood neighborhood. (Photos courtesy of the Shoreline Historical Society)

NOTE: While some historical scenes are from locations outside the station subarea, they provide context of the history of development of the Shoreline area.









The image in the upper left, circa 1948 shows a flood on Aurora Ave N and 160<sup>th</sup> St. near the entrance of Coefield's Fountain. The image in the lower left, circa 1939, is of the Interurban car on Pershing Bridge. The historic image in the upper right, circa 1915, shows the Fish family house on the Queen City Poultry Ranch. The image in the lower right, circa 1914, is of Mae Newkirk feeding her chickens. (Photos courtesy of the Shoreline Historical Society)





NOTE: While some historical scenes are from locations outside the station subarea, they provide context of the history of development of the Shoreline area.



# Existing Conditions in the 145<sup>th</sup> Street Station Subarea



Looking North to 145<sup>th</sup> Street and 5<sup>th</sup> Ave intersection



View of proposed light rail station site from 145<sup>th</sup> Ave & I-5 overpass



North Jackson Park and Ride Entrance at 5<sup>th</sup> Ave NE



Twin Ponds Park – East Entrance



Southeast corner of South Woods Park



Twin Ponds Park – North Entrance



Shorecrest High School



Intersection of 5<sup>th</sup> Ave and 155<sup>th</sup> St looking south



Hamlin Park



Briarcrest is primarily a residential community today with twothirds of residents living in single family homes and one-third living in apartments and condominiums. The estimated population of the Briarcrest neighborhood was 3,014 people in 2014.

# Key Sites and Assets of the Subarea

## **Twin Ponds Park**

Located just across I-5 and slightly to the north of the proposed station is Twin Ponds Park. This park is seen as a key feature, being the only major green-space and recreational area in the subarea west of I-5. The park is irregular in shape and surrounded by primarily single family homes, as well as an assisted living center across the street to the east.

The park was originally referred to as South Central Park by King County. The name was changed to Twin Ponds at some point, likely named after the two ponds that are the dominant feature of the park. In the 1940s and 1950s the property was mined for peat.

Recent improvements to Twin Ponds Park were implemented through a bond approved by voters in 2006. The bond acquired park property and made improvements to its soccer fields. Improvements included installation of synthetic turf to replace a formerly sand field. This also improved surface water quality and drainage. The Twin Ponds Community Garden is an organic P-Patch-style garden in the SE corner of Twin Ponds Park. It consists of 36 10' x 10' raised beds and two 4' x 10' accessible beds. "The Giving Garden" is located in the center of the community garden and is dedicated to growing food for donation to the local food bank, Hopelink Shoreline. The Giving Garden is run entirely by volunteers. Twin Ponds Park and Twin Ponds Community Garden are owned and operated by the City of Shoreline.

## Paramount Open Space and Paramount Park

Paramount Park and Open Space are located about five blocks east of the planned light rail station. Paramount Park is located just to the north of Paramount Open Space. Paramount Open Space is a wooded area available for passive recreation use with soft-surface trails, pond access, and interpretive and plant identification signage. Paramount Park has been improved to accommodate more active recreation and contains baseball/softball fields, restrooms, playground, skate park, a trail that circumnavigates the park, and picnic shelters. The park and open space areas are frequently used by area residents.

## **Protection of Parks and Open Space Assets**

The City of Shoreline fully intends to preserve and protect existing park and open space lands in the subarea. As such, no change in land use is proposed for these areas. In community workshops during the planning process, participants stated that parks and open space areas would continue to provide valuable green space to future residents as the subarea redevelops and that land use alternatives should look to maximize access to these features. Participants also were concerned that the natural resources and habitat areas of the park be sufficiently protected to avoid impacts from population growth and more intensive use over time.



## **Church Properties**

There are a few church properties within the station subarea. These properties are larger in size than the single family parcels that make up most of the subarea. These properties could become potential transit-oriented development sites, due to their size and location along arterial and collector streets. If the property owners are willing and interested, portions or all of these sites have the potential to be redeveloped over time, converting all or portions of the site to mixed use with housing (including affordable options). Proposed zoning under the action alternatives studied in this DEIS would accommodate this redevelopment. These properties could either be redeveloped directly by the owners or sold to interested developers in the future at the owners' discretion.

## Southeast Neighborhoods Subarea

The Southeast Neighborhoods Subarea is bounded on the south by NE 145<sup>th</sup> Street, on the west by 8<sup>th</sup> Avenue NE, on the north by NE 155<sup>th</sup> and NE 150<sup>th</sup> Streets, and on the east by Bothell Way.

The City of Shoreline developed a subarea plan for the Southeast Neighborhoods, which was adopted in May 2010. The plan was developed several years before the preferred location for the 145<sup>th</sup> Street light rail station was identified, but makes reference to a potential future light rail stop in the subarea. Updated land use designations were adopted in the subarea, allowing more medium and high density residential as well as mixed use and community business. Several policies in the plan pertaining to Natural Environment; Land Use; Housing; Transportation; Parks, Recreation & Open Space; Economic Development; and Community Design are relevant to the 145<sup>th</sup> Street Station Subarea Plan, as summarized in Chapter 2 of this DEIS.

# Home-based Businesses and Interest in Converting from Single Family Use

There are a few small neighborhood businesses in the subarea, and an interest in more flexibility to convert single family homes to office and small business use. As with other urbanizing areas, there will be a growing need for more neighborhood services and businesses in the subarea, under the action alternatives studied in the DEIS. There is also an increasing trend in teleworking, with more people interested in having home-based businesses and offices. This growing need can be addressed through adjustments to zoning regulations to provide more flexibility to convert single family homes to business and office uses. Refer to discussion later in this section about proposed zoning and development provisions that would accomplish this under the action alternatives.

## Aurora Square Community Renewal Area

Aurora Square is a shopping district built in the 1960s at the crossroads of Aurora Avenue N and N 155<sup>th</sup> Street, outside the subarea, but within the retail service area of existing and future residents of the subarea. The 70-acre site was designated as a Community Renewal Area (CRA) by Shoreline City Council, recognizing that economic renewal would deliver multifaceted public benefits. A Renewal Plan for the CRA was developed in 2013 and calls for several key actions as part of redevelopment and revitalization of the area. More aspects of this plan are summarized in Chapter 2, but the key opportunity related to the station subarea is proximity and access to the shopping center (in



its current form as well as to potential future new uses there) via N-NE 155<sup>th</sup> Street. Public amenities and infrastructure redevelopment at Aurora Square could be resources for future station subarea residents. For example, a grand public space is envisioned with redevelopment of the shopping center, which could become an important destination for subarea residents. Also the CRA plan calls for implementation of district energy and eco-district solutions. Infrastructure in N-NE 145<sup>th</sup> Street and/or N-NE 155<sup>th</sup> Street built for district energy conveyance could possibly be designed to extend to future customers in the station subarea. Good multimodal connections between Aurora Square and the station subarea will be important as planning, design, and implementation of redevelopment projects proceed. More information about the plan is available at:

http://www.cityofshoreline.com/business/aurora-squarecommunity-renewal-area.

## **The Fircrest Campus**

The Fircrest Campus is state-owned property that is not in the subarea, but located immediately to the east. Fircrest School, located at the campus, is a state-operated residential habilitation center for individuals with developmental disabilities. The Adult Training Program offers Fircrest residents vocational training and supported employment opportunities.

As with Aurora Square, redevelopment at the Fircrest Campus could offer land uses that are compatible and cohesive with the new redevelopment in the station subarea over time. However, any decisions about potential development on this campus would be up to the State, and entail a master planning process that would include extensive public involvement, and an act of the Legislature. The City is unaware of any such proposal, and is not considering any change in use or zoning regarding Fircrest as part of this subarea process

# Redevelopment Potential Based on Market Analysis and Recent Trends

Redevelopment opportunities in the subarea are based on a specific station subarea market assessment prepared for the City of Shoreline by Leland Consulting Group (August 2014). Information from Sound Transit's Lynnwood Link Extension Station Area Transit-Oriented Development Potential report (April 2013) also was reviewed. Redevelopment opportunities consider the long-range potential for growth and change in the station subarea consistent with Shoreline's vision and the regional objective to maximize the number of people living and working in proximity to high-capacity transit.

Key findings of the station subarea market assessment completed by Leland Consulting Group include the following.

 An increased demand in multifamily and various types of housing as Shoreline continues to attract residents of varying income levels. While the market assessment prepared by Leland Consulting Group for the 145<sup>th</sup> Street Station Subarea identified a potential demand for approximately 800 residential units or more through 2035, additional demand for housing could occur during the next twenty years depending on changes in the market, opportunities provided elsewhere, property owners' willingness to redevelop or sell their properties for redevelopment, and other factors. Certainly, the demand for housing would continue beyond twenty years, and may grow higher depending on these factors.





- New demand for retail and commercial services, most likely being pulled into place as part of mixed-use projects. Challenges with this development would be accommodating the growing need for parking associated with these services.
- The office market in the area will most likely not grow significantly because this type of land use is generally attracted to denser areas and transportation nodes.
- Health care facilities, higher or primary education, government facilities, and other uses are also potential candidates for the station subarea, but are not considered market driven.
- The 5<sup>th</sup> Ave NE corridor has potential to be seen as a "neighborhood boulevard".

The Lynnwood Link Extension Station Area Transit-Oriented Development Potential report completed by Sound Transit in 2013 included a preliminary market assessment of the demand for office space, multifamily housing, retail space, and lodging. The findings of the TOD Development Potential report were generally consistent with the findings of the subarea market assessment described above.

The Urban Land Institute (ULI), a national professional organization for developers, real estate investors and land use professionals researches and tracks trends in redevelopment across the nation. In a 2014 forecast of "development prospects," ULI ranked infill housing and urban mixed use redevelopment as the two highest prospects. Retiring baby boom generation and the emerging generation of home buyers and renters (also known as the Millennials or Generation Y) are creating a higher demand for urban infill housing and mixed use.

Based on recent studies by ULI and others, both of these types of consumers are seeking active neighborhoods and in many cases are looking for more compact, connected urban lifestyles. While urban central cities are projected to do well in the coming years based on this demand, places that mix the best of suburban and compact, mixed use qualities may be most desirable. In a recent national survey "American in 2013: Focus on Housing and Community" ULI found that among adults polled (including Baby Boomers and Millennials/Gen Y-ers), the quality of public schools, parks and recreation facilities, walkability, and short distance to work or school all ranked as important or very important.

Shoreline's reputation as a livable community, with good schools, parks, trails, and other amenities, will continue to attract residents in the coming decades. However, the potential timing and pace of redevelopment is difficult to predict given the influences of market forces, property owner interests, the need to assemble large enough parcels for redevelopment, and many other factors described earlier.

For more information on market analysis and trends refer to the report prepared by BAE Urban Economics, available at: <u>http://www.cityofshoreline.com/Home/ShowDocument?id=1570</u> <u>4</u> as well as the analysis prepared by Leland Consulting Group for the 145<sup>th</sup> Street Station Subarea, available at: <u>http://www.cityofshoreline.com/home/showdocument2id=1785</u>

http://www.cityofshoreline.com/home/showdocument?id=1785 5.



# Relationship of the City of Shoreline Comprehensive Plan and Code Provisions to the Subarea Plan

The 145<sup>th</sup> Street Station Subarea Plan would become an adopted element of the City of Shoreline Comprehensive Plan. The City of Shoreline Comprehensive Plan contains extensive goals and policies that are relevant to the subarea and planned action, including specific framework policies for the light rail station areas and Land Use Element policies that guide station subarea planning. Relevant goals and policies of the Comprehensive Plan, as well as the plan's land use designations, and other applicable provisions are summarized in Chapter 2 of this DEIS. While the proposed changes in land use are consistent with Comprehensive Plan policies, some amendments to the Comprehensive Plan would be required to support implementation of the subarea plan (such as amendments to the land use map and descriptions).

The City's Development Code, a section of the Shoreline Municipal Code, includes requirements, standards, and guidelines for zoning and development, including private and public facilities. Specific revisions and updates to the Development Code would be required with adoption of the subarea plan. Since light rail is a new form of transit service coming to the community with unique opportunities, Development Code revisions have been created to support transit-oriented development opportunities, with new and unique regulations to implement the City's vision for the subarea. Development Code amendments to support the 145<sup>th</sup> Street Station Subarea Plan would create new zoning designations and provisions to address building setbacks, architectural step-backs of buildings, building heights, design standards, allowable uses, housing types, transition standards between land uses, parking requirements, and affordable housing provisions. These are described in more detail in Section 3.1.3 Mitigation Measures.

# **3.1.2** Analysis of Potential Impacts

This section of the DEIS analyzes potential impacts related to land use of the three alternatives: Alternative 1—No Action, Alternative 2—Connecting Corridors, and Alternative 3—Compact Community. **Figure 3.1-4, Figure 3.1-5, and Figure 3.1-6** later in this section depict these alternatives. The concept creating a green network of pedestrian and bicycle friendly streets, trails, stormwater management and low impact development facilities in public rights-of-way is proposed under each of the action alternatives. This concept is described in more detail in Section 3.6 of this DEIS. **Figure 3.1-7** shows a conceptual illustration of the proposed green network.

# **Necessary Plan and Code Amendments**

Adoption of any of the action would require updates to the Shoreline Comprehensive Plan and Shoreline Municipal Code (including the Development Code and zoning provisions). This is an expected outcome of the subarea planning process, and the City is prepared to make these amendments.

Comprehensive Plan amendments effective upon adoption of the subarea plan would revise the Land Use Map to correspond with zoning designations. Goals and policies of the Land Use Element, including those pertaining specifically to Mixed Use and Commercial Land Use and Light Rail Station Subareas would be revised to more closely align with the subarea plan and its



proposed policies as part of the 2015 docket cycle. Because Comprehensive Plan policies listed in Chapter 2 of this DEIS are applicable to the subarea, the subarea plan will likely include a nominal number of proposed policies, which would provide direction regarding implementation or further study.

Both action alternatives would require amendments to the zoning and Development Code provisions. City zoning maps would need to be amended, and zoning descriptions and requirements related to the new zoning categories would need to be integrated into the City's Code. Proposed zoning is described later in this section.

Additional Development Code amendments, many developed through the 185<sup>th</sup> Street Station Subarea Planning process, include more flexibility for converting single family homes to exclusive business or office use, design and transition standards, and incentives and requirements for green building and affordable housing.

Regulations that allow for development agreements could be applied within the MUR-85' and MUR-65' zones. With a Development Agreement, bonus density/height could be granted by the City with the provision of specific features. Required elements would include affordable housing, provision of park space, structured parking, and green building.

Other development standard amendments address requirements such as height, setbacks, step backs in buildings, architectural treatments, and a variety of other provisions applicable to the MUR-85', MUR-65', MUR-45', and MUR-35' zoning. Recommended Development Code amendments are described under 3.1.3 Mitigation Measures, and will be encompassed within the future Planned Action Ordinance created for the subarea.

Alternative 1—No Action would not amend existing zoning or development standards.

# Proposed Zoning Categories and Descriptions

Four new zoning categories are being introduced for the subarea. These would be applicable under any new zoning adopted for the subarea.

- MUR-85': Mixed use residential with 85-foot building height \*
- MUR-65': Mixed use residential with 65-foot building height\*
- MUR-45': Mixed use residential with 45-foot maximum building height; based on R-48 zoning
- MUR-35': Mixed use residential with 35-foot maximum building height; based on R-18 zoning

\*Potential exceptions are described later in this section.

These new zoning designations were developed to support neighborhood-serving businesses and additional housing styles. They represent a change from the current system of defining zoning by density maximums to using height limits instead. The City is updating Code provisions to add these zones and define allowed uses; dimensional, design, and transition standards; mandatory requirements; and incentives for desired amenities. Existing single-family homes are protected under all new zoning



designations. Refer to the illustrations at the end of this section for illustrations of potential housing styles that could be built within these zoning categories.

### **MUR-85'**

**Mixed-Use Residential—85-foot base height:** This zone would allow building heights of 85 feet (generally seven stories tall). Building types would typically be mixed use with residential and/or office uses above commercial or other active use at the ground floor level. This zone would accommodate mixed use with residential and/or office uses above commercial or other active use at the ground floor level. Building types would generally be 5 over 2 (five levels of wood-frame construction over a two level concrete podium base with these two levels typically consisting of active uses and parking).

## MUR-65'

**Mixed-Use Residential—65-foot base height:** This zone would allow building heights of 65 feet (generally five to six stories tall). This zone would accommodate mixed use with residential and/or office uses above commercial or other active use at the ground floor level. Building types would generally be 5 over 1 (five levels of wood-frame construction over a one level concrete podium at the ground floor level).

# Potential Height Bonus with Development Agreements in MUR-85' and MUR-65' Zones

The Planning Commission discussed, and included in draft regulations, provisions for developer agreements that could award additional height/density for projects that provide a mix of required and optional amenities. See additional discussion later in the section and draft development regulations for more information. This would only be applicable to development projects in the MUR-85' and MUR-65' zones. The next feasible building height for construction after the 5 over 2 building type requires steel frame construction, which is significantly more expensive, and usually requires twelve stories to cover costs. As such, the allowable maximum height for buildings in the MUR-85' and MUR-65' zones with development agreements would be 140 feet, which would allow twelve to fourteen stories. For purposes of analysis in this DEIS, it was assumed that 25 percent of the properties zoned MUR-85' in Alternative 3 and MUR-65' in Alternative 2 would be developed to the 140-foot height at buildout, although this assumption is likely high.

It is anticipated that is could take many years to implement redevelopment at the density allowed in the MUR-85' zoning. Redevelopment of this type (supporting building heights of seven stories or more with development agreements) would require aggregation of a large number of parcels. Given current market forces, which generally do not support construction of tall buildings in single-family neighborhoods, it is more likely that lower-density styles would occur initially through infill development. However, more intense uses may be appropriate in the long-term.

## MUR-45'

**Mixed-Use Residential—45-foot height limit:** Similar to the existing zoning category R-48 that allows 48 dwelling units per acre, this zone would allow multi-family building types. The height limit for MUR-45' would be 45 feet (differing from the height limit of R-48, which currently varies from 40 feet if adjacent to single family zones, 50 feet if adjacent to multi-family



zones, and 60 feet with a Conditional Use Permit). The new MUR-45' zone would be limited to 45 feet regardless of adjacent zoning, which equates to a four story building. The MUR-45' zone would allow housing styles such as mixed use buildings with three levels of housing over an active ground floor/commercial level. Buildings such as row houses, townhomes, live/work lofts, professional offices, apartments, etc. also could be developed in MUR-45', and single family homes could be converted to commercial and professional office uses like in MUR-35'.

#### MUR-35'

**Mixed-Use Residential—35-foot height limit:** Similar to the existing zoning category R-18 that allows 18 dwelling units per acre, this zone would allow multi-family and single family attached housing styles such as row houses and townhomes. The height limit for this zone is 35 feet, which is the same as single-family R-6 zones, and equates to a 3-story building. MUR-35' also would allow commercial and other active uses along streets identified as arterials. These types of buildings might include live/work lofts, professional offices, and three-story mixed use buildings (two levels of housing over one level of commercial). This also would allow conversion of existing homes to restaurants, yoga studios, optometrist offices, and other uses.

#### **Retention of Existing Zoning Designations**

The action alternatives would retain varying portions of the subarea in existing zoning designations. Existing zoning categories in the subarea are listed in Chapter 2. For more information about these zoning designations, refer to the Shoreline Municipal Code: <a href="http://www.codepublishing.com/wa/shoreline/">http://www.codepublishing.com/wa/shoreline/</a>.

#### **Consistency with Plans and Policies**

The Washington State Growth Management Act (GMA) requires participating jurisdictions to conduct capital facilities planning for six and twenty year planning horizons. The 145<sup>th</sup> Street Station Subarea Plan will summarize capital facilities improvements that would be needed to support implementation of rezoning (redevelopment) in the station subarea over the next twenty years. The subarea plan and Planned Action Ordinance will set a growth target that provides a framework for anticipated population, household, and employment growth between 1.5 percent and 2.5 percent annually. By identifying an area for initial focus, capital improvements can be better defined to serve that area.

If growth were to exceed the overall average of 1.5 percent to 2.5 percent and occur more quickly, achieving the twenty year growth target earlier, the City would update capital facilities improvements planning to support additional growth beyond the twenty year target. The City updates its capital facilities plans on a regular basis anyway, and would continue to closely monitor improvement needs in the subarea as growth and change occur over the next twenty years to ensure that sufficient infrastructure (transportation, utilities, etc.) is in place to support redevelopment as it occurs.

Alternative 1—No Action is not consistent with or supportive of the City's adopted Comprehensive Plan or policies of other plans adopted by the City. Alternative 1 also it is not consistent with plans and policies adopted at the regional, state, and federal levels, it is not a viable option for meeting the purpose and need of the planned action.

# The First Twenty Years of Implementation under Either Action Alternative

Both action alternatives are consistent with existing plans and policies. Implementation requirements related to planning and development regulations over the first twenty years would be similar under either Alternative 2—Connecting Corridors or Alternative 3—Compact Community, the anticipated pace of growth and change would be similar. While Alternative 2 would cover a broader geographic extent than Alternative 3, the level of ongoing implementation and regulation activities would be similar under either action alternative.

Alternative 2—Connecting Corridors is consistent with and supportive of adopted plans and policies at the local, regional, state, and federal level. Alternative 2 spreads the level of potential change out over more geography by lining the 5<sup>th</sup> Avenue NE and N-NE 155<sup>th</sup> Street corridors with mixed use zoning (primarily MUR-35' and MUR-45'). The mixed use along these corridors would provide more opportunities for neighborhood retail and services over time and would result in more employment opportunities than under Alternative 3. As such, Alternative 2 would help to support some of the City's policies related to economic development more fully than Alternative 3.

Alternative 3—Compact Community is consistent with and supportive of adopted plans and policies at the local, regional, state, and federal level. Alternative 3 would result in more intensive and vibrant urban development around the light rail station and more housing opportunities than under Alternative 2 at full build-out. As such, Alternative 3 would help to support some of the City's policies related to housing more fully than Alternative 2. As discussed in Section 3.2, both action alternatives would provide opportunities to better balance housing and jobs in Shoreline. Alternative 2 would result in more employment than Alternative 3, and as such, could help to achieve the jobs-tohousing balance more effectively at full build-out than Alternative 3. However, Alternative 3 would provide a greater level of diverse housing opportunities (including affordable options), addressing another important need in Shoreline.

# Land Use Patterns and Compatibility between Land Uses

Under all alternatives, it is anticipated that the subarea would experience growth and change. Alternative 2—Connecting Corridors would result in the greatest extent of geographic change and the highest level of employment opportunities at full build-out. Alternative 3—Compact Community would result in the highest level of population and housing levels at full buildout. That said, it is anticipated that the pace of change during the first twenty years after adoption would generally be the same with either of the action alternatives (averaging around 1.5 percent to 2.5 percent annually).

Alternative 1—No Action would retain existing zoning. However, "No Action" does not translate to "No Change" in the subarea. With the implementation of light rail, there would be greater demand for land uses in proximity to the station, particularly for housing. The current zoning for much of the subarea is R-6. The R-6 zoning allows six units per acre. The average number of units per acre currently in the subarea is 3.2. As such a substantial number of new housing units (more than double the current number) could be constructed over time in the subarea under the current zoning. Attached single family





homes (such as duplexes, triplexes, and townhouses) and accessory dwelling units (attached or detached, maximum one per lot) are allowed in the R-6 zone if proposed redevelopment meets certain criteria (refer to Shoreline Municipal Code 20.40.510). The current maximum height for buildings in the R-6 zone is 35 feet.

Much of the housing stock in the subarea is reaching an age of 50 to 60 years or more, and some residents have made substantial renovations to their homes or have demolished existing homes to build new ones. This trend likely would continue under Alternative 1. With the anticipated demand for more housing that will occur with light rail, as homesites are redeveloped in the subarea in the future (under Alternative 1—No Action), the community could expect to see either larger and taller single family homes or combinations of various types of attached multiple-unit single family buildings and accessory dwelling units.

Most homes in the subarea are currently one story or two stories in height (approximately 15 to 25 feet high). New residential buildings, including accessory dwelling units, could be constructed to a maximum height of 35 feet (approximately 3 to 3.5 stories). For comparative purposes, throughout north Seattle, there has been significant construction of this type over the last twenty years, which has changed the character of single family neighborhoods.

It is also important to note that redevelopment under Alternative 1—No Action would not be consistent with the adopted vision for the light rail station area as a vibrant, equitable transit-oriented district. Single family redevelopment under the No Action Alternative would provide fewer opportunities for new affordable housing than proposed under Alternatives 2 or 3, as well as a significantly lower overall quantity of various types of housing to fit diverse income levels, and substantially less mixed use/neighborhood commercial at street level. Increased housing choice and affordability will be needed to serve the growing demand in the subarea over the long term.

Without zoning changes to require higher densities, single family home development would continue to be the focus in the subarea. Transit-oriented redevelopment opportunities with a variety of housing choices and mixed use development would not occur.

Investments in infrastructure and street improvements in the subarea would be very limited under Alternative 1—No Action compared to the two action alternatives.

# The First Twenty Years of Implementation under Either Action Alternative

It is anticipated that Alternative 2—Connecting Corridors would change land use patterns over a broader geographic extent than Alternative 3—Compact Community over the first twenty years of implementation. That said, the MUR-35' and MUR-45' zoning along 5<sup>th</sup> Avenue NE and 155<sup>th</sup> Street in Alternative 2 would result in multifamily development that could be designed to be generally compatible with existing land uses in the subarea (building heights of 35 feet and 45 feet are generally compatible with the current allowed building height of 35 feet over most of the subarea). Setback requirements, landscaping, and design guidelines in City Code regulations would help to enhance compatibility.

Alternative 3 calls for more overall density and taller base height in the vicinity surrounding the planned light rail station than Alternative 2 calls for. This means that a greater level of change to land use patterns in the area around the planned light rail station could occur over the next twenty years under Alternative 3 than under Alternative 2. That said, market forces may not support the full level of transit-oriented development proposed under the MUR-65' and MUR-85' zoning for decades, and the need to assemble properties to accommodate larger parcels for development of the taller buildings under either alternative could take many years, slowing the progress of redevelopment.

Alternative 2—Connecting Corridors proposes more geographic extent of change than Alternative 3 in comparison of the two action alternatives. However, less density is proposed in proximity to the planned light rail station with the MUR-65' zoning (vs. MUR-85' in Alternative 3). More retail/commercial use and office use would be expected under Alternative 2, than under Alternative 3 based on the extent of mixed use proposed zoning.

The pattern of proposed zoning would result in appropriate transitions between land uses. For example, MUR-45' is typically located between MUR-85' and MUR-35' zoning. MUR-35' zoning is typically located between MUR-45' and single family zoning such as R-6. Even with these provisions, as change occurs throughout the subarea, there could be incompatibilities between new redevelopment and existing homes. The City's development standards provide setbacks, landscaping requirements, and other provisions to provide buffers between land uses that would help to address these issues.

Alternative 3—Compact Community would create change in a smaller geographic area than under Alternatives 2 in comparison of the two action alternatives. However, Alternative 3 would permit taller buildings than Alternative 2 via the MUR-85' designation in proximity to the planned light rail station.

Alternative 3 includes the same transitions in zoning as described above under Alternative 2, and it would require the same development standards. As discussed for Alternative 2, the same potential incompatibilities would be expected as the subarea redevelops and the same proposed development standards would be applied under Alternative 3 as under Alternative 2. Alternative 3 potentially could have less capacity and flexibility to respond to market conditions and property owners' interests than Alternative 2 since less land area would be rezoned.

## Potential Built Form and Neighborhood Character

Each of the two action alternatives proposes a mix of zoning under the MUR-85', MUR-65', MUR-45', and MUR-35' categories, along with retaining other existing zoning categories in the subarea. Over many decades the subarea likely would transform from a predominantly single family residential to a mix of housing types and neighborhood-serving retail and uses. While this would be a substantial change, the growth and related change would be expected to occur very gradually, similar to other urbanizing neighborhoods in the region such as Green Lake and Greenwood. Each phase of redevelopment would be evident as it occurs, but





the overall level of change would be less perceptible than if it were to occur within a shorter timeframe. Mitigation measures including a variety of development standards and transitional zoning provisions are proposed to help buffer existing land uses from new redevelopment in the subarea.

With redevelopment, neighborhood character would change, but the subarea also would see positive enhancements, such as improved streets, intersections, and streetscapes, additional public spaces, parks, trails, and recreation facilities, and community benefits such as sidewalk cafes, public art, plazas, and other amenities. Low impact development treatments such as rain gardens and stormwater planters would be envisioned as surface water management solutions. Regarding these positive changes to the neighborhood, Alternative 2 could result in the most amount of these over time due to the geographic extent of redevelopment proposed compared to Alternative 3.

Redevelopment of the subarea regardless of the alternative pursued would be subject to compliance with City policies and regulations, including historic preservation requirements as applicable.

Under Alternative 1—No Action, there would be minimal change to built form and neighborhood character. Streets, roadways, and public spaces would remain similar in character over the long term to today's conditions, although traffic congestion station subarea could become a growing problem due to limited roadway and intersection improvements.

#### **Differences in Building Heights**

**Alternative 1—No Action** would not change existing zoning and as such, existing building height requirements would remain. The vast majority of the subarea is currently zoned R-6 (Residential allowing six units per acre), and in the R-6 zone a maximum height of 35 feet is allowed. In other areas of the subarea zoned for community business and multifamily, taller buildings already are allowed under the current Code requirements.

The First Twenty Years of Implementation under Either Action Alternative — Alternative 2—Connecting Corridors could increase building heights over a broader geographic extent than Alternative 3—Compact Community over the first twenty years of implementation. The MUR-35' and MUR-45' zoning proposed along 5<sup>th</sup> Avenue NE and 155<sup>th</sup> Street in Alternative 2 would allow building heights of 35 feet and 45 feet compared to the current allowed building height of 35 feet over most of the subarea. Setback requirements, landscaping, and design guidelines in City Code regulations would help to enhance compatibility. Alternative 3 calls for more overall density and taller base height in the vicinity surrounding the planned light rail station than Alternative 2. However over the next twenty years under either action alternative, redevelopment to the MUR-65' or MUR-85' densities and heights would be expected to be impeded by the lack of larger parcels and the need to aggregate parcels with willing-seller interest.

**Alternative 2—Connecting Corridors** proposes MUR-65' zoning, which would allow a base building height of 65' with the potential for bonus height/density of up to 140 feet with development



agreements that ensure projects meet special requirements. The MUR-65' zone is located in proximity to the planned light rail station. This is a lower height than the MUR-85' proposed in this area under Alternative 3.

As discussed previously, if development projects incorporate characteristics such as green building, additional affordable housing, structured parking, and other amenities, they could have the ability to add bonus height/density to their projects, which could involve increases in height above the 65-foot level (but no greater than 140 feet) in all areas zoned MUR-65'. This would be a negotiated and public process.

For purposes of this analysis, population and household unit calculations liberally assume this could occur over approximately 25 percent of the area zoned MUR-65'. If over time the City observes a trend that could lead to more than 25 percent of buildings in height over 65 feet (and greater density), additional environmental analysis would need to be conducted to evaluate potential impacts and reassess project and program needs before additional development would be permitted.

Under Alternative 2 a greater extent of MUR-45' (45-foot maximum height) and MUR-35'(35-foot maximum height) is proposed than under Alternative 3. This means that while some building heights in the vicinity of the light rail station may be lower under Alternative 2 than under Alternative 3, overall throughout the subarea, the height of buildings would increase more, with a focus along the connecting corridors of N-NE 155<sup>th</sup> Street or 5<sup>th</sup> Avenue NE. Alternative 3—Compact Community proposes MUR-85' zoning, which would allow a base building height of 85' with the potential for bonus height/density of up to 140 feet with development agreements that ensure projects meet special requirements, as discussed for Alternative 2. Population and household unit calculations in this DEIS assume this would occur over approximately 25 percent of the area zoned MUR-85'.

As with Alternative 2, if over time the City observes a trend that could lead to more than 25 percent of buildings in height over 85 feet (and greater density), supplemental environmental impact analysis would need to be conducted to evaluate potential impacts and reassess project and program needs before additional development would be permitted.

Market analysis has indicated that there may be minimal demand for mid-rise buildings in the subarea in the foreseeable future. However, over time this demand could grow. Zoning would preserve a broader range of possibilities for the subarea over the long term.

Under Alternative 3, there would be less MUR-45' and MUR-35' zoning along the N-NE 155<sup>th</sup> Street and 5<sup>th</sup> Avenue NE corridors, and as such building heights along these corridors would be expected to be lower at build-out than under Alternative 2.

As previously discussed, under Alternative 1, there could be a change in character over time to taller, more expensive single family homes. Many current homes are one story to two stories in height. Up to 35-foot-high homes are allowed, so taller homes could be constructed over time. Up to six units per acre are allowed under the current R-6 zoning. Because the current



density is typically 3.2 units per acre in the subarea, property owners may choose to add more units over time. Accessory dwelling units and/or conversion and reconstruction of homes into duplexes and triplexes would be permissible if certain requirements are met by Code.

#### **Extent of Mixed Use Development**

Mixed use development could occur with MUR-85', MUR-65', MUR-45', or MUR-35'. The ground floor of this type of construction typically includes active uses along the street with parking behind the active uses and below grade. The second level can be housing, office, or commercial use, or in some cases it can be structured parking. This is a common type of construction in the region for mixed use development. Active uses at the street level help to ensure a vibrant, walkable environment and typically include neighborhood retail uses and services.

MUR-45' (four/four and a half building levels above ground) and MUR-35' (three/three and a half building levels above ground) also could include active uses at the street level, and often would consist of various types of low-scale multifamily housing such as row houses, townhomes, live/work lofts, and other types of attached housing.

Under Alternative 2, more MUR-45' and MUR-35' zoning is proposed than under Alternative 3. As such more overall mixed use redevelopment could occur in the subarea than under Alternative 3 at full build-out. This also could result in more employment opportunities.

#### Potential Real Estate Speculation and Long-Term Predictability

Property owners have expressed concerns that real estate investors may be interested in purchasing single family homes and holding them as rentals until the time is right for redevelopment in the future. Many homeowners in both station subareas have already received letters offering fair market value, possibly because investors believe that properties will be less expensive before zoning changes or light rail service is operational. This type of speculative buying could occur regardless of whether or not the City was planning to rezone areas surrounding future stations immediately. One reason to implement zoning change sooner rather than later is to provide long-term predictability regarding what type of uses will be allowed where, and ample time for homeowners to become informed about the potential for change and determine their own long-range plans. For those that choose to sell, understanding the long-term potential of the property may allow them to capture additional value.

# Graphic Models of Bulk and Height and Illustrative Examples

Each alternative has been modeled to show the expected built form (housing and mixed use development) that could result from implementation. Illustrations later in this section present simulated 3-D Sketch Up models for each alternative. These models conceptually illustrate the potential building form that could occur with full build-out of each alternative using the SketchUp model technique. The colors shown in the model graphics represent the MUR zoning designations described



previously. Photographic examples of the built form/housing types that could be constructed under the new MUR zoning categories also are presented.

Renderings also have been developed to show possible redevelopment concepts for various locations in the subarea and are presented later in this section, along with layout concepts of how potential redevelopment could be configured adjacent to existing and new streets in the subarea. It should be noted that these illustrations are conceptual and represent a point in time of phased development that could occur over many decades in the future.

### **3.1.3 Mitigation Measures**

#### **Proposed Mitigation Measures**

The City intends to amend its Comprehensive Plan to reflect the proposed alternative adopted through the subarea plan, and the City will adopt revisions to the Shoreline Municipal Code, including amendments to zoning provisions and development standards to support implementation of the subarea plan. These would occur under any of the redevelopment alternatives.

Capital project investment would be expected to increase over time to support anticipated growth, and as a result subarea residents would benefit from transportation and infrastructure improvements. The Capital Facilities Element of the Comprehensive Plan also would need to be updated at the next opportunity to reflect priorities for the subarea to support the proposed growth. With the proposal to adopt the planned action, redevelopment would be able to proceed through streamlined environmental review as long as it is consistent with the planned action thresholds for growth for the next twenty years. The planned action threshold also provides a checkpoint for monitoring growth and change in the subarea. If more growth occurs than expected, the City would need to reevaluate the environmental analysis in this DEIS and potentially implement additional mitigation measures.

As described earlier in this section of the DEIS and in Chapter 2, there are extensive policies already adopted by the City of Shoreline that would be supported by the subarea plan, regardless of which action alternative is implemented. Policies within the Shoreline Comprehensive Plan; Climate Action Plan; Environmental Sustainability Strategy; Economic Development Strategy; Transportation Master Plan; Parks, Recreation, and Open Space Plan; Surface Water Master Plan; Southeast Neighborhoods Subarea Plan; and other adopted plans would be furthered and supported by redevelopment of the subarea.

## Action Alternatives: Alternative 2—Connecting Corridors and Alternative 3—Compact Community

Retaining and enhancing neighborhood character is important to residents in the station subarea and required by City of Shoreline Comprehensive Plan policies and Shoreline Municipal Code provisions. It will be important that new higher density residential and mixed use land uses in the station subarea provide buffering and transition when located adjacent to single family uses. Some of the transitions would be accomplished through the proposed zoning frameworks as discussed previously. In addition, the City is preparing amendments to zoning provisions and development



standards in the City's Code that would lead to improved neighborhood character and compatibility. Specific development regulations for the light rail station areas will be adopted. A brief summary of these anticipated provisions is provided below. For the full text of proposed amendments to the Code, refer to the planned action ordinance that will be adopted with the subarea plan.

- **Development Agreements**—A new set of provisions is proposed allowing Development Agreements that would require specific elements from redevelopment projects in exchange for density/height increases. Elements such as affordable housing, green building standards, and structured parking would be required. Elements such as combined heat and power systems, provision of commercial uses, sidewalk cafes, provision of public open space, and other amenities would be encouraged.
- Affordable Housing—Expanded provisions are being proposed for the Code to encourage and incentivize affordable housing as part of redevelopment projects.
- Mixed Use Residential and Live/Work—Provisions related to mixed use residential development including additional requirements related to live/work units are proposed to encourage a vibrant transit-oriented community with a mix of housing and employment in proximity to the light rail station.
- Green Building—Provisions are being developed to encourage green building and low impact development.

- Historic Preservation—While no formally designated historic landmarks exist in the subarea, there are twelve parcels listed in the City's inventory that are potentially eligible. The mitigation for these potential historic resources would involve a review of historic and cultural resources as part of redevelopment affecting those parcels; however, prescriptive measures to mitigate impacts would need to be developed by the City.
- Greater Flexibility in Use of and Conversion of Single Family Homes to Business and Office Use—Code provisions would allow more flexibility for business and office use in existing single family homes and conversion of homes to exclusively business/office use.
- Light Rail Station and Park-and-Ride Design—The light rail station project including the station and park-and-ride structure design would be subject to a specific agreement with the City that would establish design and implementation provisions for the light rail facilities.
- Community and Social Amenities, Heritage
   Commemoration, Cultural Opportunities, and Public
   Art—As the neighborhood grows and changes gradually
   over time, there will be an increased demand for
   community amenities, such as public gathering spaces for
   events, senior facilities, community meeting rooms,
   farmers markets, community gardens, interpretation and
   heritage projects that commemorate Shoreline's history,
   public art, and other social cultural opportunities and
   events.

These experiences for citizens and visitors are encouraged by City of Shoreline policies, and in addition, the City will consider potential regulations that would require provision of these elements with redevelopment projects. Mitigation measures for parks, recreation, open space are addressed in Section 3.4 of the DEIS. Also, see Section 3.2 for additional discussion of mitigation measures related to Housing Choice and Affordability.

- Updated Development Standards—A variety of amendments to development standards are proposed to reflect the new MUR zoning categories and to require and encourage specific elements such as:
  - Revised front, rear, and side yard setbacks
  - Standards for transition areas, which include architectural step backs in the building design ("wedding cake" form), and landscaping requirements
  - Vehicular access oriented to side and rear rather than to the front along arterials
  - o Traffic calming measures
  - o Compatible architectural styles
  - Streetscape improvements and landscaping requirements
  - $\circ$  ~ Open space and recreation facilities for residents
  - o Parking quantity, access, and location standards
  - Reduced parking requirements in transit-oriented MUR zones

- o Shared parking, HOV, and EV parking encouraged
- o Vehicle circulation and access
- o Good pedestrian access
- o Bicycle parking facilities
- o Lighting to enhance safety and security
- Building orientation to the street and transitions between buildings
- o Design of public spaces
- Building façade articulation and compatible architectural form
- o Covered access ways
- Preferences for architectural finishes and materials
- o Preferences for fencing and walls
- Screening of utilities, mechanical equipment and service areas
- Land clearing and site grading standards
- Tree conservation encouraged with residential redevelopment (but exempt from commercial and MUR-85' redevelopment)
- o Signing requirements
- Integration of public art, planters, water features, and other public amenities



#### **Other Recommended Mitigation Measures**

- **Exploring Partnerships**—In the near term, the City could explore potential public/private and public/public partnership opportunities in the subarea to help encourage and catalyze redevelopment. These could include working with Sound Transit on the park-and-ride structure and potentially integrating other uses along its street frontage. Partnerships also could include involvement in implementing affordable housing and community uses in the subarea.
- **Proactive Capital Investments**—The City intends to proactively seek funding for transportation and infrastructure improvements in the subarea, which will help to support redevelopment and enhance neighborhood character.

## **3.1.4 Significant Unavoidable Adverse Impacts**

Proposed redevelopment of the subarea under either Alternative 2—Connecting Corridors or Alternative 3—Compact Community would result in substantial changes in neighborhood character over time. Intensification of development and higher buildings

would occur incrementally. While the intensity of redevelopment in this area would be substantially greater than existing conditions, the new redevelopment would be consistent with the Shoreline Comprehensive Plan, and other local, regional, state, and federal plans and policies. Additional housing and employment opportunities would be created, and it is anticipated that a variety of positive neighborhood benefits would result through redevelopment.

Implementation of the planned action would set a threshold for growth and development in the subarea for the next twenty years that aligns with an expected level of capital improvements and investments to support the growth. This would allow the City to monitor change and would trigger additional environmental review if change occurs at a more aggressive pace than anticipated.

Keeping in mind that change in the subarea would be expected to occur gradually, over may decades, it is not anticipated that there would be significant unavoidable adverse impacts that could not be addressed through the mitigation measures discussed above and the City's ongoing proactive monitoring of conditions in the subarea.





Figure 3.1-4 Alternative 1—No Action (Existing Zoning is Shown in the Map)





Figure 3.1-5 Alternative 2—Connecting Corridors





Figure 3.1-6 Alternative 3—Compact Community

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Figure 3.1-7 The Green Network—Proposed Under the Action Alternatives





**Mixed-Use Residential—85-foot base height:** This zone would allow building heights of 85 feet (generally 7 stories tall). Building types would typically be mixed use with residential and/or office uses above commercial or other active use at the ground floor level. This designation could be applied as shown in the proposed zoning map. This would allow for the construction type of five levels of wood frame over a two level concrete podium level (sometimes referred to as 5 over 2). Mechanical equipment and roof features would need to be contained within the height limit.

It should be noted that this density is unlikely to be supported by current market forces and would require aggregation of a large number of parcels, and as such, it may be some time before this building type would be developed in the subarea.

While construction of the 85' building height would be allowed under proposed development regulations, it is anticipated that infill redevelopment would occur in stages over multiple decades, and lower height infill may

occur before redevelopment of taller buildings. This type of mixed use infill redevelopment attracts placemaking elements such as restaurants and shops, which over time become catalysts for additional redevelopment. Over the long-term, this type of more intensive transit-oriented development is envisioned for areas closest to the station.

The Planning Commission discussed, and included in draft regulations, provisions for developer agreements that could award additional height/ density (up to 140 feet) for projects that provide a mix of required and optional features. According to draft code language, required elements include green building, affordable housing, and structured parking. The purpose of a development agreement is to trade extra development potential for amenities desired by the community because additional units can off-set the cost of providing such amenities. It is intended to be a negotiated and public process, requiring notification, a hearing, and City Council approval.

#### Example Housing and Mixed Use Building Styles-MUR-85' Zoning Designation







Mixed-Use Residential—65-foot base height: This zone would allow building heights of 65 feet (generally 5 to 6 stories tall). Building types would typically be mixed use with residential and/or office uses above commercial or other active use at the ground floor level. This designation could be applied as shown in the Connecting Corridors zoning scenario in the areas nearest to the station and allow the highest intensity uses. This would allow for the construction type of five levels of wood frame over a one level concrete podium level (sometimes referred to as 5 over 1). Mechanical equipment and roof features would need to be contained within the height limit.

It should be noted that this density is unlikely to be supported by current market forces and would require aggregation of a large number of parcels, and as such, it may be some time before this building type would be developed in the subarea.

While construction of the 65' building height would be allowed under proposed development regulations, it is anticipated that infill redevelopment would occur in stages over multiple decades, and lower height infill may occur before redevelopment of taller buildings. This type of mixed use infill redevelopment attracts placemaking elements such as restaurants and shops, which over time become catalysts for additional redevelopment. Over the long-term, this type of more intensive transit-oriented development is envisioned for areas closest to the station.

The Planning Commission discussed, and included in draft regulations, provisions for developer agreements that could award additional height/ density (up to 140 feet total height) for projects that provide a mix of required and optional features. According to draft code language, required elements include green building, affordable housing, and structured parking. The purpose of a development agreement is to trade extra development potential for amenities desired by the community because additional units can off-set the cost of providing such amenities. It is intended to be a negotiated and public process, requiring notification, a hearing, and City Council approval.

#### Example Housing and Mixed Use Building Styles-MUR-65' Zoning Designation



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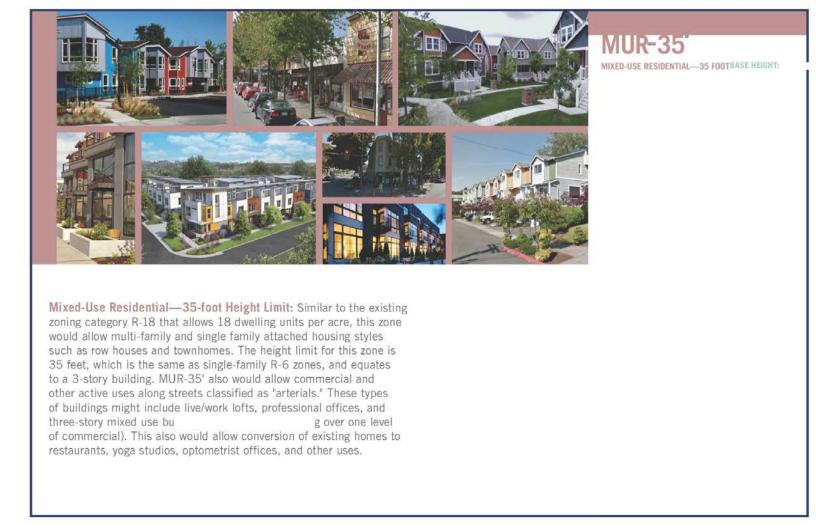


**Mixed-Use Residential**—**45-foot Height Limit:** Similar to the existing zoning category R-48 that allows 48 dwelling units per acre, this zone would allow multi-family building types. The height limit for MUR-45' would be 45 feet (differing from the height limit of R-48, which currently varies from 40 feet if adjacent to single family zones, 50 feet if adjacent to multi-family zones, and 60 feet with a Conditional Use Permit). The new MUR-45' zone would be limited to 45 feet regardless of adjacent zoning, which equates to a 4-story building. The MUR-45' zone would allow housing styles such as mixed use buildings with three levels of housing over an active ground floor/commercial level. Buildings such as row houses, townhomes, live/work lofts, professional offices, apartments, etc. also could be developed in MUR-45', and single family homes could be converted to commercial and professional office uses like in MUR-35'.

Example Housing and Mixed Use Building Styles-MUR-45' Zoning Designation







Example Housing and Mixed Use Building Styles-MUR-35' Zoning Designation





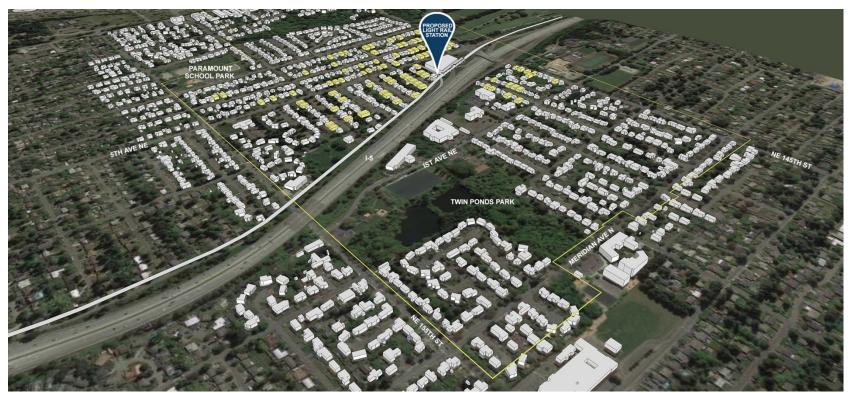
Sketch-Up Model View for Alternative 1—No Action, Looking Northwest toward the Planned Light Rail Station





Sketch-Up Model View for Alternative 1—No Action, Looking Eastward toward the Potential Light Rail Station





Sketch-Up Model View for Alternative 1—No Action, Looking Southeast toward the Planned Light Rail Station







Sketch-Up Model View for Alternative 2—Connecting Corridors, Looking Northwest toward the Planned Light Rail Station





Sketch-Up Model View for Alternative 2—Connecting Corridors, Looking Eastward toward the Planned Light Rail Station







Sketch-Up Model View for Alternative 2—Connecting Corridors, Looking Southeast toward the Planned Light Rail Station





Sketch-Up Model View for Alternative 3—Compact Community, Looking Northwest toward the Planned Light Rail Station







Sketch-Up Model View for Alternative 3—Compact Community, Looking Eastward toward the Planned Light Rail Station





Sketch-Up Model View for Alternative 3—Compact Community, Looking Southeast toward the Planned Light Rail Station







Conceptual possibility for redevelopment and improvements in the vicinity of 5<sup>th</sup> Avenue NE and NE 149<sup>th</sup> Street, looking southwest





Conceptual possibility for redevelopment and improvements along 5<sup>th</sup> Avenue NE in the vicinity of NE 160<sup>th</sup> Street





Conceptual possibility for an enhanced pedestrian and bicycle crossing of Interstate 5, view from planned light rail station





Conceptual illustration of the possibility of redevelopment in the background of the community gardens at Twin Ponds Park, looking southeast





Conceptual illustration of possible redevelopment surrounding the Paramount School Park site





Conceptual illustration of possible MUR-35' residential development near Paramount Open Space and including stormwater planters along street as part of the green network





# **3.2 Population, Housing, and Employment**

This section describes the affected environment, analyzes potential impacts, and provides recommendations for mitigation measures for population, housing, and employment.

## **3.2.1 Affected Environment**

Shoreline is known as a great place to live in the central Puget Sound region, based on the strong sense of community, good schools, and many parks and recreation opportunities provided throughout the city.

#### **Existing Population and Trends**

Shoreline's overall estimated population in 2013 was 54,790 based on information recently released by the US Census Bureau. An estimated 8,321 people live in the 145<sup>th</sup> Street Station Subarea, approximately 15.2 percent of the city's population. (Note: population is based on subarea boundaries that extend to the outer boundaries of the Traffic Analysis Zones of the subarea. See discussion on page 3-68 and 3-69.)

Shoreline's population increased in the 1980s and 1990s but remained fairly stable between 2000 and 2010. Although the total population of Shoreline did not increase substantially up to 2010, the city has grown an average of slightly over 1 percent per year since 2010 based on US Census Bureau estimations.

In review of the demographic composition of the population, two trends are occurring, including greater race/ethnic diversity and aging of Shoreline's population. The largest minority population is Asian-American, composed of several subgroups, which collectively made up 15 percent of the population as of the 2010 Census. The African-American population, comprising 2,652 people, had the largest percentage increase, at 45 percent between 2000 and 2010, followed by people of two or more races, at 15 percent. Hispanics may be of any race, and this demographic increased 41 percent to 3,493. Additionally, foreign born residents of Shoreline increased from 17 percent of the population to an estimated 19 percent by 2010, as measured by the American Community Survey.

The median age of community residents increased from 39 in 2000 to 42 in 2010. "Baby Boomers", those born between 1946 and 1964, comprise approximately 30 percent of the population. Shoreline has the second largest percent of people 65 and older among King County cities, at 15 percent. Among older adults, the fastest growing segment is people 85 and older, up one-third from 2000.

Families (two or more people related by birth, marriage, or adoption) declined from 65 percent to 61 percent of all households in Shoreline between 2000 and 2010. Non-family households increased from 35 percent to 39 percent of households. The number of people living in group quarters, such as nursing homes, adult family homes, and Fircrest increased by 9 percent between 2000 and 2010 based on the 2010 Census.

#### Population Growth Trends and Forecasts

The central Puget Sound region is one of the fastest growing metropolitan areas in America. Seattle, Shoreline's neighboring city to the south, grew faster than any other major American city in 2013, according to the US Census Bureau, with approximately 18,000 people moving to the city in the one-year period. Seattle



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is the 21<sup>st</sup> largest city in the US. Seattle's growth rate from July 1, 2012 to July 1, 2013 was 2.8 percent, the highest rate among the 50 most populous US cities, bringing the total 2013 population to 652,405. From July 1, 2012 to July 1, 2013, the Seattle-Tacoma-Bellevue metropolitan area ranked tenth in numerical population growth of metropolitan areas of the US, adding 57,514 people. According to Puget Sound Regional Council's 2040 Transportation Plan, our region will add 1.4 million people and 1.1 million jobs by 2040.

Washington State's overall population is currently 6,951,785 and is forecasted to grow by just above 1 percent per year through 2025 and then at less than 1 percent per year through 2040 according to the Washington State Office of Financial Management.

In looking at growth rates of regional cities, communities in the Puget Sound region have grown at various rates, between less than 1 percent, to about 3 percent annually between 2010 and 2013.

In a review of other transit-oriented districts around light rail and high-capacity transit in the US, growth rates have varied greatly. However, average annual growth rates of around 2 percent are often achieved, but are influenced by a variety of factors.

Based on recent information released by the US Census Bureau, the 15 fastest growing cities in America with populations of 50,000 and larger (similar to Shoreline's size) grew between 3.8 percent (Pearland, Texas) and 8 percent (San Marcos, Texas) between 2012 and 2013.

While Shoreline's population was stable with little growth up to 2010, the population of the community is expected to continue to grow as more housing and employment opportunities are

developed. Seattle and other regional cities also are forecasted to continue to grow over the next couple of decades.

The opportunity and potential for growth in the 145<sup>th</sup> Street Station Subarea would be higher with the adoption of the proposed mixed use zoning under the two action alternatives. However, growth would be moderated by potential challenges related to redevelopment, such as the need to aggregate parcels to create sites large enough for mixed use and multifamily housing, as discussed in Section 3.1. Uncertainty about the market and property owners' interests in redeveloping or selling their properties also moderates the forecast for growth.

With all of these considerations, the anticipated average annual growth forecasted for the subarea is around 1.5 percent to 2.5 percent. This is the assumed growth rate for purposes of subarea planning and environmental analysis.

#### Capacity Building for the Future and Focus of the Planned Action

Given the considerations discussed above, it is important to recognize that the 145<sup>th</sup> Street Station Subarea Plan would be a long-range plan to be achieved over many decades. The plan would create capacity and opportunity for redevelopment over the long term for current and future generations of residents in the subarea. Proposed rezoning allows flexibility for redevelopment to occur in a variety of locations in the subarea based on property owners' interests and development market influences.

While the 145<sup>th</sup> Street Station Subarea Plan will set the vision for what could occur over the long term, it also will define capital improvement and project priorities to support potential redevelopment over the next twenty years, which is the established planning horizon. The plan will address anticipated



phasing and locations of redevelopment and make specific recommendations for public investment in the subarea to support this first stage of growth.

In order to align the subarea plan, also called the "planned action," with the twenty-year planning horizon of 2035, twentyyear growth targets have been set for the Preferred Alternative. These are discussed later in this section and elsewhere in this DEIS.

# Assigned Growth Targets for Shoreline

The King County Countywide Planning Policies (CPPs), adopted to implement the Growth Management Act (GMA), establish household growth targets for each jurisdiction within the county. Each target is the amount of growth to be accommodated during the 2006-2031 planning period. Shoreline's growth target for this period is 5,000 additional households; projected to 5,800 households by 2035 (200 households per year).

Applying Shoreline's current average household size of 2.4 people per residence, 5,800 new households equates to 13,920 new residents by 2035. Another recent target set by Puget Sound Regional Council (PSRC) calls for Shoreline to gain more than 7,200 new jobs by 2035, improving its jobs-to-housing ratio to 0.91. (Note: jobs-to-housing ratio and balance are discussed and defined later in this section.)

The City is required to plan for its assigned growth target and demonstrate that its Comprehensive Plan is able to accommodate the growth targets for households and employment. Sufficient land (zoning capacity) and strategies must be in place to show that there will be available housing and services for the projected population. The City of Shoreline has met these requirements through its Comprehensive Plan, which shows that growth targets can be met through housing and employment capacity, particularly along Aurora Avenue N.

Although the city has capacity to meet these growth targets with or without upzoning the station subarea, intensifying densities in proximity to the light rail station is smart growth, consistent with regional goals and policies, as well as those adopted by the City.

With more people living and working near high-capacity transit, Shoreline can better achieve the objectives of the Climate Action Plan and better meet the policies and provisions of the Comprehensive Plan and Transportation Master Plan. Adopted policies related to expanding housing and transportation choices and enhancing quality of life through better connectivity in the station subarea also can be realized.

The proposed zoning and proximity to high-capacity transit also could help to catalyze redevelopment and encourage higher rates of growth in the subarea than are currently being experienced citywide and regionally. A review of growth rates over the last ten years shows that the City has only recently been barely keeping pace with the growth target of 200 households per year within the last couple of years and is not yet meeting the jobs/employment growth target range.

Transit-supportive densities of housing and mixed use development are being proposed in the subarea under the two action alternatives studied in this DEIS. Even without changes in zoning, there would be growing pressure in the single family neighborhoods of the subarea and surrounding neighborhoods for additional households as more people will want to live near the station. As such, even without the adoption of higher densities, it would be expected that homeowners would renovate



or redevelop their properties to maximize density, as discussed in Section 3.1.

Under the proposed zoning, density would be added to the subarea through various types of multifamily and transit-oriented development (mixed use buildings, condominiums, apartments, townhomes, etc.) allowed under the proposed MUR-85', MUR-65', and MUR-45' zoning categories. Attached single-family homes, cottage housing, accessory dwelling units, duplexes, triplexes, and other multiplexes would be expected to develop as a result of the proposed MUR-35' zoning, and this area would serve as a transition between the more intensive density in the station vicinity and the traditional detached single family neighborhoods in outer areas.

Refer to Section 3.1 for a more detailed explanation of expected urban form and neighborhood character.

# **Redevelopment Potential and Timing**

The potential for growth and timing of redevelopment would be influenced by various factors in the subarea, including development market factors and individual property owner decisions on the use of their properties. Proposed upzoning under Alternative 2—Connecting Corridors and Alternative 3— Compact Community would maximize opportunities for future redevelopment. While both alternatives would result in redevelopment and population increases, as well as economic development opportunities at full build-out, Alternative 3 would accommodate more households and population than Alternative 2. Alternative 2 would provide more job opportunities than Alternative 3.

There are church parcels of larger size west of I-5 and north of 145<sup>th</sup> St. NE that would be suitable for additional growth in the near term, if property owners are interested in redeveloping and

incorporating additional uses and development onto their site, or are willing to sell to an interested developer.

Most other properties within the subarea are smaller sized single family residential lots and would need to be aggregated into larger parcels to create a site size suitable for redevelopment to the proposed zoning. As such, throughout the DEIS analysis, it is stated that growth in the subarea would be anticipated to occur very gradually over many decades. As an example, even if the higher average annual growth rate of 2.5 percent were to occur, it is estimated that it would take approximately 60 years to reach full build-out of Alternative 2—Connecting Corridors and 63 years to reach full build-out of Alternative 3—Compact Communities. At a 1.5 percent average annual growth rate, it would take 94 years to reach full build-out of Alternative 3.

# Population Study Area for Purposes of the Subarea Plan and DEIS

While the subarea plan is focused on the study areas shown in Figures 1-1 and 1-2 in Chapter 1, for purposes of population and employment projection calculations the limits of Traffic Analysis Zones (TAZ) boundaries are assumed as the study area. In some cases, these boundaries extend beyond the land use and mobility study area boundaries designated for the subarea, and overall the area covers a broader geography. TAZs are the common methodology for analyzing demographics regionally in planning.

TAZs for the study area are depicted in **Figure 3.2-1**. It is important to note that the population figures throughout this DEIS (existing and forecasted) relate to the areas shown in this TAZ map, beyond the land use and mobility (multimodal transportation) study area boundaries. The existing estimated population within the 145<sup>th</sup> Street Station Subarea, including the TAZs associated with the subarea is 8,321. Population within



these TAZs has been a key factor in calculating potential impacts and demand for transportation, public services, utilities in this DEIS.

Recent plans for the Point Wells area have been presented by Snohomish County, which is going through a separate environmental impact analysis process to assess redevelopment opportunities. While potential population growth for Point Wells would occur outside the 145<sup>th</sup> Street Station Subarea, projected traffic in the subarea as a result of Point Wells development is assumed in this DEIS, as described and analyzed in Section 3.3 Multimodal Transportation.

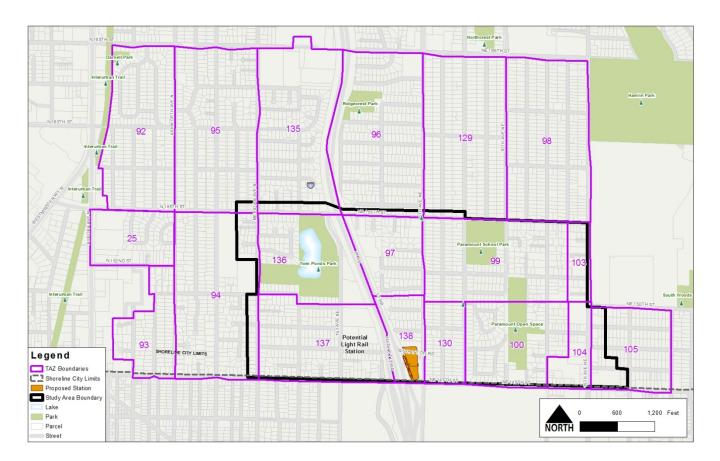


Figure 3.2-1 Traffic Analysis Zones (TAZs) in Proximity to 145<sup>th</sup> Street Station Subarea, Referenced for Population Calculations

# Existing and Planned Housing and Household Characteristics

Planning for expected growth requires an understanding of current housing and household characteristics, as well as economic and market trends and demographics. A summary of the market assessment and economic trends was provided in Section 3.1. Below is a summary of current housing and household characteristics in Shoreline including conditions related to affordability. Much of the information presented is based on the supporting analysis in the 2012 Comprehensive Plan for the City of Shoreline.

# **Comprehensive Housing Strategy**

The demand analysis and housing inventory developed to support the Housing Element of the 2012 Comprehensive Plan meets the requirements of the Growth Management Act (GMA) and Countywide Planning Policies (CPPs) and complements past planning efforts, including the City's Comprehensive Housing Strategy, adopted by Council in February 2008.

The Comprehensive Housing Strategy was the culmination of work by a Citizen Advisory Committee formed in 2006 to address the city's housing needs. The strategy contains recommendations for expanding housing choice and affordability while defining and retaining important elements of neighborhood character, educating residents about the importance and community benefit of increasing local choice and affordability, and developing standards to integrate a variety of new or different housing styles within neighborhoods.

# Shoreline and Subarea Housing Inventory

Shoreline can be classified as a historically suburban community that is maturing into a more self-sustaining urban environment. Almost 60 percent of the current housing stock was built before 1970, with 1965 being the median year of home construction. Only 7 percent of homes (both single and multi-family) were constructed after 1999. Much of the housing stock is approaching 70 years of age and most is over 50 years old. More and more homeowners are either making substantial renovations to their homes or demolishing existing homes and replacing with new ones. This trend would likely continue absent upzoning in the subarea.

Over the last decade, new housing was created through infill construction of new single-family homes and townhouses, with limited new apartments in mixed-use areas adjacent to existing neighborhoods. Many existing homes were remodeled to meet the needs of their owners, contributing to the generally good condition of Shoreline's housing stock.

The characteristics of the 145<sup>th</sup> Street Station Subarea are consistent with these described for Shoreline overall, although the subarea has seen less infill construction and redevelopment activity than other areas of the city.

## Quantity of Housing Units, Types, and Sizes

Single-family homes are the predominant type of existing housing and encompass a wide range of options, which span from older homes built prior to WWII to new homes that are certified through the Leadership in Energy and Environmental Design (LEED) program. Styles range from expansive homes on large view lots to modest homes on lots less than one quarter acre in size. In the station subarea, the predominant single family lot size is 8,000 to 10,000 square feet (with some lots around 6,000 square feet). Although much of the existing zoning in the subarea is



Residential, six units per acre (R-6), the current built density of the subarea is approximately 3.2 units per acre.

According to the 2010 Census, there were 21,561 housing units within the City of Shoreline, an increase of 845 since 2000. About 73 percent of these housing units are single-family homes. Compared to King County as a whole, Shoreline has a higher percentage of its housing stock in single-family homes. **See Table 3.2-1**. In the 145<sup>th</sup> Street Station Subarea, including the TAZs associated with the subarea, it is estimated that there are currently 3,467 households.

While there are an increasing number of households in Shoreline each year, population levels indicate a potential trend toward a decrease in the number of people per household. This is consistent with national trends. However, overall in King County, household size has remained stable since 1990 (see **Table 3.2-2**). Shoreline's average household size is currently 2.4 people per dwelling unit.

In Shoreline, the average number of bedrooms per unit is 2.8. Only 16 percent of housing units have less than 2 bedrooms. This compares with 21 percent of housing units with less than 2 bedrooms in King County. With larger housing units and a stable population, overcrowding has not been a problem in Shoreline.

The US Census reported only 1.6 percent of housing units with an average of more than one occupant per room, and no units that averaged more than 1.5 occupants per room (American Community Survey 2008-2010).

#### **Affordable Housing Metrics for Shoreline**

To understand affordability metrics, percentages of Area Median Income (AMI) are calculated. For example, The 2011 AMI for Shoreline was \$66,476. Therefore, a household with that income would be making 100 percent of median; a household that made 50 percent of that amount (\$33,238) would be classified at 50 percent AMI; a family making 30 percent of that amount (\$19,943) would be classified at 30 percent AMI.

Families that pay more than 30 percent of their income for housing are considered "cost-burdened" and may have difficulty affording necessities such as food, clothing, transportation, and medical care.

# **Definition and Measure of Housing Affordability**

The generally accepted definition of affordability is for a household to pay no more than 30 percent of its annual income on housing. When discussing levels of affordability, households are characterized by their income as a percent of the Area Median Income (AMI). The box above highlights information pertaining to affordable housing metrics in Shoreline. **Figure 3.2-2** shows wage/income levels for various professions.



Type of Housing	Shoreline (units)	Shoreline (percent)	King County (units)	King County (percent)
Single-family	16,295	72.5%	504,083	59.3%
Duplex	258	1.1%	16,727	2.0%
Triplex/4-plex	516	2.3%	37,876	4.5%
Multifamily (5+ units)	5,218	23.2%	269,949	31.9%
Mobile Homes	134	0.6%	17,385	2.1%
Other (boat, RV, van, etc.)	49	.02%	753	0.1%

#### Table 3.2-1 Number of Dwelling Units for Each Housing Type

**Draft Environmental Impact Statement** 

Table 3.2-2 Average Household	l Size
-------------------------------	--------

	1980	1990	2000	2010
Shoreline	2.7	2.5	2.5	2.4
King County	2.5	2.4	2.4	2.4

Source: 1980 Census, 1990 Census, 2000 Census, 2010 Census

Source: American Community Survey 2008-2010

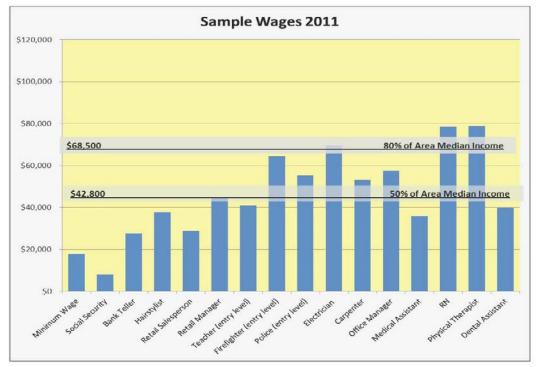


Figure 3.2-2 Income Levels/Wages of Various Professions

#### Table 3.2-3 Assisted Household Inventory

Provider	Units
King County Authority	669
HUD Subsidized Units	80
Tax Credit Properties **	272
Total	1,021

Source: City of Shoreline Office of Human Services, 2012 \*\*The Low Income Housing Tax Credit program was created by Congress through passage of the Emergency Low-Income Housing Preservation Act in 1987. When the tax credits expire, these properties may be converted to market rate housing.



# **Special Needs Housing and Homelessness**

#### **Group Quarters**

Group quarters, such as nursing homes, correctional institutions, or living quarters for people who are disabled, homeless, or in recovery from addictions are not included in the count of housing units reported above. According to the 2010 Census, about 2.6 percent of Shoreline's population, or 1,415 people, live in group quarters. This is a slightly higher percentage than the 1.9 percent of King County residents living in group quarters. Fircrest in Shoreline, one of five state residential habilitation centers for people with developmental disabilities, provides medical care and supportive services for residents. This reflects a decline from more than 1,000 residents 20 years ago, as many residents moved into smaller types of supported housing, such as adult family or group homes.

## Financially Assisted Housing

As shown in **Table 3.2-3** financially assisted housing units for lowand moderate-income individuals and families exist in the City of Shoreline.

In addition to this permanent housing, King County Housing Authority provided 566 vouchers to Shoreline residents through the Section 8 federal housing program, which provides housing assistance to low income renters (City of Shoreline Office of Human Services, 2012).

#### Homelessness

According to the Shoreline School District, 123 students experienced homelessness during the 2010-2011 school year. According to the 2012 King County One Night Count of homeless individuals, 31 people were found living on the streets in the north end of King County.

#### **Emergency and Transitional Housing Inventory**

Five emergency and transitional housing facilities provide temporary shelter for their current maximum capacity of 49 people in the City of Shoreline. These facilities focus on providing emergency and transitional housing for single men, families, female-headed households, veterans, and victims of domestic violence. These facilities are listed in **Table 3.2-4**.

## **Housing Tenure and Vacancy**

Historically, Shoreline has been a community dominated by single-family, owner-occupied housing. More recently, homeownership rates have been declining. Up to 1980, nearly 80 percent of housing units located within the original incorporation boundaries were owner-occupied.

In the 1980s and 1990s a shift began in the ownership rate. The actual number of owner-occupied units remained relatively constant, while the number of renter-occupied units increased to 32 percent of the city's occupied housing units in 2000, and nearly 35 percent in 2010. This shift was mainly due to an increase in the number of multi-family rental units in the community. Refer to **Table 3.2-5**.

A substantial increase in vacancies from 2000 to 2010 may partially be explained by apartment complexes, such as Echo Lake, that had been built but not yet occupied during the census count, or by household upheaval caused by the mortgage crisis. More recent data indicates that vacancies are declining (see discussion later in this section).



# **Housing Demand and Affordability**

Housing demand is largely driven by economic conditions and demographics. Economic and market conditions have been assessed for the station subarea, and these are summarized in Section 3.1. Demographic characteristics influence market demand with regard to number of households; household size, make-up, and tenure (owner vs. renter); and preference for styles and amenities. For instance, young singles and retired people may prefer smaller units with goods, services, and transit within walking distance as opposed to a home on a large lot that would require additional maintenance and car ownership. It is important for Shoreline to have a variety of housing styles to accommodate the needs of a diverse population.

In 2010, about 61 percent of households were family households (defined as two or more related people), down from 65 percent in 2000. Approximately 30 percent were individuals living alone, an increase from 26 percent in 2000. The remaining 9 percent were in nonfamily households where unrelated individuals share living quarters. Households with children decreased from 33 percent of households in 2000 to 28 percent of households in 2010. Single-parent families also decreased from 7.4 percent to 6.9 percent of households, reversing the previous trend of increasing single-parent families. Shoreline now has a lower percentage of households with children than King County as a whole, where households with children account for about 29 percent of all households, down from 30 percent in 2000. **Table 3.2-6** summarizes the changing characteristics of households.

## A Changing Community

In addition to the changes noted above, Shoreline's population is becoming more ethnically and racially diverse. In 2000, 75 percent of the population was white (not Hispanic or Latino). By 2010, this percentage dropped to 68 percent. Shoreline's changing demographic characteristics may impact future housing demand. Newer residents may have different cultural expectations, such as extended families living together in shared housing. The increase in the number of singles and older adults in the community suggests that there is a need for homes with a variety of price points designed for smaller households, including accessory dwelling units or manufactured housing.

Demographic changes may also increase demand for multi-family housing. Such housing could be provided in single-use buildings (townhouses, apartments, and condominiums), or in mixed-use buildings. The need for housing in neighborhood centers, including for low and moderate income households is expected to increase. Mixed-use developments in central areas close to public transit will allow for easier access to neighborhood amenities and services, and could make residents less dependent on autos.

## The Need for Affordable Housing

The GMA requires CPPs to address the distribution of affordable housing, including housing for all income groups. The CPPs establish low and moderate income household targets for each jurisdiction within the county to provide a regional approach to housing issues, and to ensure that affordable housing opportunities are provided for lower and moderate income groups. These affordable housing targets are established based on a percent of the City's growth target.



U	<u> </u>	
	# Occupants	Focus
Caesar Chavez	6	Single Men
Wellspring Project Permanency	14	Families
Home Step Church Council of Greater Seattle	4	Female Head-of- Household
Shoreline Veterans Center	25	Veterans
Confidential Domestic Violence Shelter	6	Victims of Domestic Violence

Table 3.2-4 Emergency and Transitional Housing Inventory

Source: City of Shoreline Office of Human Services, 2012.

rasic 3.2 5 riousing inventory and renarc				
	2000	2010	Change 2000-2010	
Total Housing Units	21,338	22,787	+1,449	
Occupied Housing Units	20,716	21,561	+845	
Owner-Occupied Units	14,097 68.0% of occupied	14,072 65.3% of occupied	-25 0.2% decrease	
Renter-Occupied Units	6,619 32.0% occupied	7,489 34.7% of occupied	+870 13.1% increase	
Vacant Units	622 2.9% of total	1,226 5.4% of total	+612 99.7% increase	

#### Table 3.2-5 Housing Inventory and Tenure

Source: 2000 Census; 2010 Census



	2000	2010	Change 2000-2010
Total Households	20,716	21,561	+845
Households with	6,775	6,015	-760
Children	32.7% of total	27.9% of total	11.2% decrease
Single-person	5,459	6,410	+951
Households	26.5% of total	29.7% of total	17.4% increase
Households with an	4,937	5,509	+572
Individual over 65	23.8% of total	25.6% of total	11.6% increase

Table 3.2-6 Changing Household Characteristics in Shoreline

Source: 2000 Census; 2010 Census

	Shoreline	King County
Very Low Income (<30% AMI)	3,154 (15%)	53,784 (13%)
Low Income (30%-50% AMI)	2,580 (12%)	52,112 (11%)
Moderate Income (50%-80%AMI)	3665 (17%)	76,279 (16%)
80%-120% AMI	4,443 (21%)	97,116 (19%)
>120% AMI	7,520 (35%)	216,821 (41%)

Source: 2008-2010 American Community Survey; King County Comprehensive Plan



The CPPs more specifically state an affordability target for moderate income households (earning between 50 percent and 80 percent AMI) and low-income households (earning below 50 percent AMI). The moderate-income target is 16 percent of the total household growth target, or 800 units. The low income target is 22.5 percent of the growth target, or 1,125 units. Of the current housing stock in Shoreline, 37 percent is affordable to moderate-income households and 14 percent is affordable to low income households (King County Comprehensive Plan, Technical Appendix B).

Assessing affordable housing needs requires an understanding of the economic conditions of Shoreline households and the current stock of affordable housing. Estimated percentage of households at each income level is presented in **Table 3.2-7**.

## Affordability Gap

The "affordability gap" is the difference between the percentage of city residents at a particular income level and the percentage of the city's housing stock that is affordable to households at that income level. A larger gap indicates a greater housing need. **Table 3.2-8** depicts the affordability gap.

Where affordability gaps exist, households must take on a cost burden in order to pay for housing. Cost-burdened households paying more than 30 percent of household income for housing costs comprise 39 percent of homeowners and 48 percent of renters in Shoreline. Very low income cost-burdened households are at greatest risk of homelessness and may be unable to afford other basic necessities, such as food and clothing. The substantial affordability gap at this income level suggests that the housing needs of many of Shoreline's most vulnerable citizens are not being met by the current housing stock. Closing this gap will require the use of innovative strategies to provide additional new affordable units and the preservation/ rehabilitation of existing affordable housing.

In order to assess the relative status of housing affordability in the city, comparison cities in King County were selected based on number of households and housing tenure. Two cities (Sammamish and Mercer Island) with few renters were selected for comparison, along with two cities (Kirkland and Renton) with a higher proportion of renting households. To compare Shoreline to these cities and to King County, the number of households in each income group countywide was compared to the number of housing units affordable at each income level. **Table 3.2-9** shows the comparison of affordability gaps in these communities to Shoreline's.

**Figure 3.2-3** shows Affordable Housing Units by Income Group in a map that shows multiple factors related to housing affordability in various Shoreline neighborhoods, and this complexity warrants a description that is not included with other maps. The map shows average household income levels of various neighborhoods, by census tract. For each neighborhood, there is also a list that begins with the name of the neighborhood, and displays the number of houses whose assessed value would be considered affordable to various income groups. Recall that to be affordable, a mortgage and expenses, such as property tax, should not exceed 30 percent of the annual household income. The price range for housing that would be affordable for each income group is listed in the legend.

To provide an example, in the Meridian Park Neighborhood, one of the neighborhoods of the station subarea, the average household income in 2010 was \$82,148. Within that neighborhood, there were 3 homes appraised below \$99,720,



which is the price a very low income household would be able to afford without exceeding 30 percent of their income. There are 735 homes appraised between \$99,720 and \$265,999, which is the price a low income household would be able to afford without exceeding 30 percent of their income.

#### **Falling Home Values**

As in much of the rest of the country, home prices in Shoreline fell during the Great Recession years, but have recently started to rise again. After increasing rapidly for over a decade, median sales price reached a peak in June 2007 at \$375,300. The median sales price in December 2011 was \$262,600, a decrease of 30 percent. (See **Figures 3.2-4 and 3.2-5**).

While decreasing prices lower the affordability gap for prospective buyers, they can also increase risk of deferred maintenance, vacancy, and abandonment. Although home and property prices are now increasing again, they have yet to reach peak levels of 2007.

## A Segmented Market

While home prices have decreased citywide since 2007 and recently have started to rise again, there is a large discrepancy in the value of homes in the city's various neighborhoods. **Table 3.2-10** presents data extracted from home sales records used by the King County Assessor to assess the value of homes in various submarkets within the city (the Assessor excludes sales that are not indicative of fair market value). Citywide data suggests that home values have continued to decline since 2010, though regional trends suggest the rate of decline is now slowing.

## **Rising Rents**

In contrast to the single-family market, apartment rents in Shoreline have stabilized near highs reached in 2009, and are likely to continue trending upward as vacancies decline. According to the most recent data available, the average rent increased from \$859 in September 2007 to \$966 in March 2012. Year-over-year trends in the Shoreline area rental market (which includes the cities of Shoreline and Lake Forest Park) are included in **Table 3.2-11** for 2008-2012. The increasing price of rental options may be limiting the city's attractiveness to new families, and the ability to provide affordable housing options for younger or fixed-income citizens and smaller households.

# **Neighborhood Quality and Housing Choice**

Neighborhood quality and the availability of diverse housing choices to fit various income levels have a direct relationship to greater housing demand. The Citizen Advisory Committee of the Comprehensive Housing Strategy stressed the need to define and retain important elements of neighborhood character, while also providing housing choice. Some members of the community have expressed concern about density and design of infill developments and the impacts of these developments on existing neighborhoods. Some members of the community support additional density and infill development, either to preserve undeveloped land in rural areas, support transit, encourage business and economic development, increase affordability, and for other reasons. Regulations that implement policy recommendations in the Housing Element and Strategy should strive to balance these concerns and opportunities.

Housing choice refers to the ability of households in the city to live in the neighborhood and housing type of their own choosing. Housing choice is supported by providing a variety of housing that allows older adults to age in place and new families to be welcomed into existing neighborhoods.



	Percent of Units Affordable to In- come Group	Affordability Gap
Very Low Income (<30% AMI)	825 (3.9%)	11%
Low Income (30%-50% AMI)	2,116 (10%)	2%
Moderate Income (50%-80% AMI)	4,886 (23%)	N/A
80%-120% AMI	6,367 (30%)	N/A

Table 3.2-8	Affordability Gap
-------------	-------------------

Source: King County Comprehensive Plan

\* Vacant units are not included in the analysis, since the affordability of vacant units is unknown.

	Very Low Income Affordability	Low Income Af- fordability Gap	Moderate Income Affordability Gap	80%-120% AMI Af- fordability Gap
Sammamish	12.1%	9.6%	10.1%	2.1%
Mercer Island	10.1%	8.9%	6.0%	6.7%
Shoreline	8.6%	1.2%	N/A	N/A
Kirkland	9.9%	4.9%	N/A	N/A
Renton	8.8%	N/A	N/A	N/A
King County	8.4%	N/A	N/A	N/A

#### Table 3.2-9 Comparison of Affordability Gap

Source: King County Comprehensive Plan

\* Discrepancy with Table H-8 results from use of Countywide household data for comparison with other cities and King County



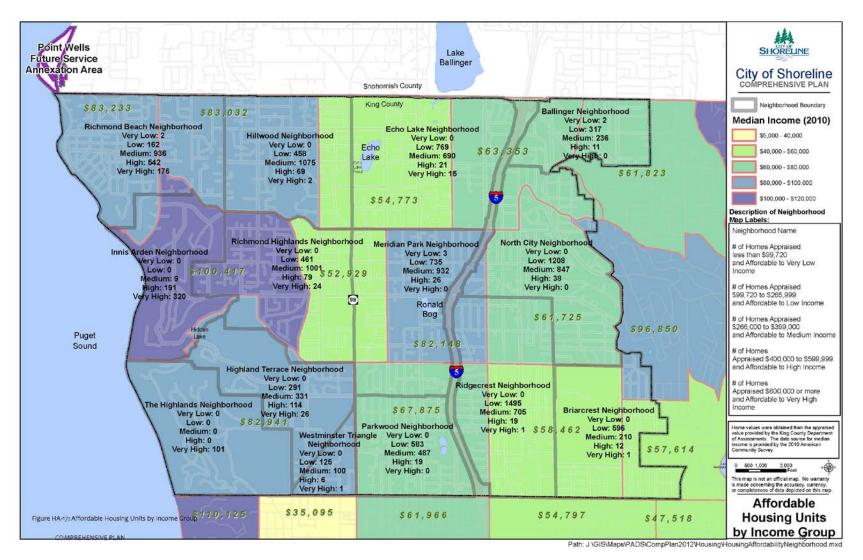


Figure 3.2-3 Affordable Housing Units by Income Group in Shoreline



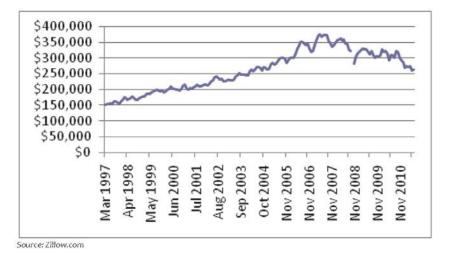
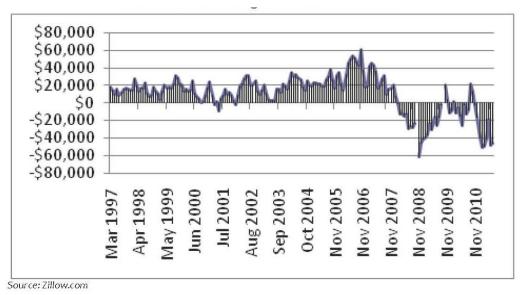


Figure 3.2-4 Median Sales Price of Homes in Shoreline







Neighborhood Area	Median Sale Price, 2010	Affordable In- come Level*	Average Change in As- sessed Value, 2010-2011
West Shoreline	\$500,00	>120% of AMI	-2.8%
West Central	\$341,500	115% of AMI	-6.0%
East Central	\$305,000	100% of AMI	-6.9%
East Shoreline	\$290,000	100% of AMI	-5.2%

Table 3.2-10 Single Family Housing Prices

Sources: King County Assessor 2011 Area Reports, 2011 HUD Income Levels

\*Figures given are the percent of 2011 typical family Area Median Income required to purchase a home at the 2010 median price. Affordable Housing Costs are based on 30% of monthly income. Figures are approximate. Additional assumptions were made in the affordability calculation.

#### Table 3.2-11 Shoreline Area Rental Market Rents & Vacancy Rates

	2008	2009	2010	2011	2012
Average Rent	\$897	\$977	\$949	\$934	\$966
Market Vacancy*	2.7%	4.6%	7.1%	5.0%	4.0%

Source: Dupre+Scott, The Apartment Vacancy Report

\*Market Vacancy excludes units in lease-up and those undergoing renovation



While Shoreline's single-family housing is in generally good condition and highly desirable for many, new housing close to neighborhood centers and high-capacity transit may be equally desirable to older adults, small households, or special-needs households with financial or mobility limitations.

Other benefits of locating housing in neighborhood centers and in close proximity to high-capacity transit include:

- Transportation cost savings;
- Improved fitness and health through increased walking;
- Lower costs for roads, utilities, and emergency services;
- Reduced road and parking costs;
- Reduced regional congestion;
- Energy conservation;
- Reduced emissions; and
- Preservation of open space.

# GMA and Regional Policies Supporting Affordable Housing

The City of Shoreline's policies related to housing and relevant to potential development in the station subarea are summarized in Section 3.1. It is also important to consider state and regional policies as guidance for subarea planning. The GMA specifically states that its housing goal is to:

"Encourage the availability of affordable housing to all economic segments of the population of this state, promote a variety of residential densities and housing types, and encourage preservation of existing housing stock." King County CPPs also encourage affordable housing and the use of innovative techniques to meet the housing needs of all economic segments of the population, and require that the City provide opportunities for a range of housing types.

The City's Comprehensive Housing Strategy, adopted in 2008, recommended increasing affordability and choice within local housing stock in order to accommodate the needs of a diverse population. Demographic shifts, such as aging "Baby Boomers" and increasing numbers of single-parent or childless households create a market demand for housing styles other than a singlefamily home on a large lot.

Puget Sound Regional Council (PSRC) administers the Growing Transit Communities Partnership (GTC). In accordance with the goals of the PSRC and GTC, high-capacity station areas should consider adopting the affordable housing policies and provisions stated in PSRC's VISION 2040. A few are included below, for the full list, read their report, available at:

<u>http://www.psrc.org/growth/growing-transit-</u> <u>communities/growing-communities-strategy/read-the-full-</u> <u>growing-transit-communities-strategy/</u>

**MPP-H-1** Provide a range of housing types and choices to meet the housing needs of all income levels and demographic groups within the region.

**MPP-H-2** Achieve and sustain — through preservation, rehabilitation, and new development — a sufficient supply of housing to meet the needs of low income, moderate-income, middle-income, and special needs individuals and households that is equitably and rationally distributed throughout the region.



**MPP-H-3** Promote homeownership opportunities for low-income, moderate income, and middle-income families and individuals.

#### City of Shoreline Affordable Housing Policies and

**Requirements**—Chapter 20.40.230 of the Development Code currently includes limited provisions for affordable housing . These provisions are being revised for application in the light rail station subareas. In addition, the City has developed draft policies for the subarea that address affordable housing needs, including direction for further implementation work to develop programs. These policies and draft Development Code provisions are provided in Section 3.2.3 Mitigation Measures. Other Code provisions and development standards related to housing and mixed use development in the subarea are summarized in Section 3.1 of this DEIS.

# Employment in Shoreline and the Subarea

In 2012, approximately 16,409 jobs existed in the City of Shoreline. Of these jobs, approximately 46 percent were service related; 17 percent were government; 16 percent were retail; 13 percent were education; 3 percent were construction; 3 percent were finance, insurance, and real estate; 1 percent was wholesale trade, transportation, and utilities; and 1 percent was manufacturing (PSRC Employment Database).

Most of these jobs were located along Aurora Avenue N. However, other employment clusters include the Shoreline Community College, and neighborhood business centers in North City, Richmond Beach Shopping Center, 5th Avenue NE and NE 165th Street, and 15th Avenue NE. Less obvious places of employment include home occupations (people working out of their homes). Major employers within the community include (listed in alphabetical order):

- CRISTA Ministries
- Costco
- Fircrest Residential Habilitation Center
- Fred Meyer
- Goldie's Casino
- Home Depot
- Northwest Security
- Shoreline, City of
- Shoreline School District
- Shoreline Community College
- State Department of Transportation

In the 145<sup>th</sup> Street Station Subarea and nearby areas within the TAZ boundaries, there are currently 1,595 jobs, including jobs in the commercial center located at NE 145<sup>th</sup> Street and 15<sup>th</sup> Ave NE and near the Aurora corridor, at either end of the subarea. This is an estimated level of employment, which was also assumed in the City's Transportation Master Plan.

# **Employment Growth Trends and Targets**

Employment within the city is a measure of the current economic activity. The following employment growth characteristics were summarized in the Economic Development Supporting Analysis to the City's 2012 Comprehensive Plan.

 Non-government employment in Shoreline is predominantly oriented toward services and retail. These two sectors comprised 62 percent of total employment as of 2010.



- Employment growth has been concentrated in services, which was the fastest growing sector between 2000 and 2010.
- The other non-government sectors in which employment grew in the last decade were manufacturing and construction/resources. Despite growth, the two sectors together accounted for only 4.4 percent of the total employment as of 2010.
- Total employment in Shoreline continued to grow over the past decade, though at a much slower pace than in the previous five years.

Encouraging employment growth within the city would improve Shoreline's jobs-to-housing ratio/balance. Jobs and housing are "balanced" at approximately 1.5 jobs per household. Jobs-tohousing ratio or balance is "a means to address travel demand by improving accessibility to jobs, as well as to goods, services, and amenities" (PSRC, Vision 2040). The creation of new jobs through economic development can help alleviate a mismatch between jobs and housing, reducing commute times and creating more opportunities for residents to work and shop within their own community.

Shoreline's jobs-to-housing ratio was 0.72 in 2010 compared to the desirable ratio of 1.5, highlighting the need for job growth and employment-supporting development.

The City conducted an analysis that compared its employment characteristics to other cities in the region and found that jobshousing balance varies considerably throughout the region. Ratios of comparative cities in 2010 were:

- Lynnwood 1.53
- Tukwila 5.56

- Marysville 0.51
- Kirkland 1.27

King County's overall ratio was 1.29 and Snohomish County's was 0.82.

In comparing Shoreline's median household income, unemployment rate, and poverty rate to these same peer cities, Shoreline had the second highest median income (only Kirkland was higher); the second lowest unemployment rate (Kirkland was lower); and the second lowest poverty rate (Kirkland was lower).

The King County Countywide Planning Policies, adopted to implement the GMA, establish employment growth targets for each of the jurisdictions within the county. The employment target is the amount of job growth the jurisdiction should plan to accommodate during the 2006-2031 planning period. Shoreline's growth target for this period is 5,000 additional jobs, projected to 5,800 by 2035. This employment growth target was also adopted by the City. A more recent target set by PSRC calls for Shoreline to gain more than 7,200 new jobs by 2035, improving its jobs-tohousing ratio to 0.91.

Several factors constrain substantial commercial development (and resultant job growth) in Shoreline, including the limited number of large tracts of developable land available for commercial or industrial uses.

In the past, Shoreline was considered a "bedroom community" from which residents travelled elsewhere for higher-wage jobs and more complete shopping opportunities. Recognizing new and innovative ways to support the local economy will assist efforts to plan for the addition of new jobs. The quality of Shoreline's economy is affected by reliable public services, the area's natural



and built attractiveness, good schools, strong neighborhoods, efficient transportation options, and healthy businesses that provide goods and services. Maintaining the community's quality of life requires a strong and sustainable economic climate.

# Other Economic Conditions Pertinent to Growth and Economic Development Opportunities

# **Revenue Base—Sales Tax and Property Tax**

The revenue base of the City is another measure of the strength of the local economy. A strong revenue base supports necessary public facilities and services for an attractive place to live and work. Two major elements of the revenue base are taxable retail sales and the assessed valuation for property taxes. A review of Shoreline's taxable sales and assessed valuation compared with other cities yielded the following observations.

- Compared to the peer cities and King County, Shoreline has a relatively low revenue base. Among peer cities, Shoreline had the second lowest per capita taxable sales and second lowest per capita assessed valuation in 2010.
- Growth in assessed valuation has been moderate over the past decade, averaging a 6.7 percent annual increase. This could be due to a relative lack of new construction in comparison to a younger community, such as Marysville.
- Retail sales growth has averaged 1.5 percent annually. This is the second highest rate of increase among the peer cities and higher than King County as a whole.

# **Other Revenue Sources**

Other sources of revenue for the City include the gambling tax, utility tax, permit fees, grants, and other fees. Gambling taxes are collected at a rate of 10 percent of gross receipts for card rooms in the city. Projected gambling tax revenue for 2012 equals 6 percent of the total forecasted general fund operating revenues. Thirteen percent of total forecasted general operating revenues are expected to come from the utility tax, and 8 percent from license and permit fees. This compares to 32 percent from property taxes, and 20 percent from sales taxes. The remaining revenue comes from contract payments, state and federal grants, and other sources.

# Real Estate Market Conditions—Retail

Retail development meets two important economic development objectives. It provides the goods and services needed by residents and businesses, and it provides a major source of tax revenue, which could take pressure off of property taxes to maintain levels of service desired by the community.

Retail sales in Shoreline have grown over the past decade, yet they are still lower than sales in the peer cities used for comparison. While Shoreline is home to many retail establishments, there is a significant amount of sales "leakage" in some retail categories. Leakage refers to a deficit in sales made in the city compared with the amount of spending on retail goods by Shoreline residents. This leakage suggests that there are major retail opportunities in several areas, as shown below.

Percentage of Shoreline Resident Retail Dollars Spent Elsewhere (Leakage):

- Health and Personal Care Stores: 41.2 percent
- Clothing and Clothing Accessories Stores: 90.5 percent



- General Merchandise Stores: 71.2 percent
- Food Service and Drinking Places: 36.5 percent

# **Real Estate Market Conditions—Office**

Shoreline has few large office concentrations or multi-tenant office buildings. New office development could provide locations for various service providers, as well as the management and support facilities for businesses with multiple outlets. The office vacancy rate for buildings listed on Officespace.com is approximately 25 percent. However, there is little or no new Class A office space in the city available to prospective tenants.

# **Real Estate Market Conditions—Residential**

New residential development in Shoreline provides housing for the local workforce and creates new opportunities for families to live in the city. Permit activity for new residential development has been increasing since 2010. The Countywide Planning Policies (CPPs) for King County set a target for the City of Shoreline to grow by about 200 households per year. A faster pace of new residential development will be needed in Shoreline to achieve this goal, and to achieve the overall target of 5,800 additional households by 2035 (with the starting year of 2006). Market analysis completed for the subarea show a demand for residential use (see Section 3.1 for more information).

# 2012-2017 Economic Development Strategic Plan

The City of Shoreline's Office of Economic Development Strategic Plan for 2012-2017 is summarized in Chapter 2 of this DEIS. The plan seeks to achieve sustainable economic growth by supporting placemaking projects. The plan acknowledges Shoreline's two planned station subareas as key economic development opportunities.

# **3.2.2** Analysis of Potential Impacts

# *Population, Housing, and Employment Forecasts for Each Alternative*

Under all alternatives, the number of households and jobs would increase. Alternative 2—Connecting Corridors and Alternative 3—Compact Community would increase population, housing, and jobs in Shoreline.

Either Alternative 2 or 3 would assist the City in meeting household and employment growth targets, consistent with the Countywide Planning Policies. Alternative 3—Compact Community would provide the most capacity to achieve housing targets over time, while Alternative 2 would provide the most flexibility in terms of zoned land area, to achieve the housing targets. Alternative 1 would have very limited ability to assist the City in meeting its housing growth targets.

Alternative 2 would result in more jobs than Alternative 3 and both action alternatives would provide substantially more job opportunities than Alternative 1—No Action.

Current population, households, and employment levels in the subarea are shown in **Table 3.2-12**. Forecasted growth in population, housing, and employment for each of the alternatives is summarized in more detail below and depicted in **Table 3.2-13**. The net change in population, households, and employment from current levels is shown in **Table 3.2-14**.



Estimated Totals for Subarea Based on Available GIS Data, 2014	
Population	8,321
Households	3,467
Employees	1,595

#### Table 3.2-12 Current (2014) Population, Households, and Employment Estimates for the Subarea

Note: the current estimated total population of the City of Shoreline is 54,790 (2013).

	Alternative 1—	Alternative 2—	Alternative 3—
	No Action	Connecting	Compact
		Corridors	Community
2035 Population*	11,040	11,207 to 13,635	11,207 to 13,635
2035 Households*	4,600	4,670 to 5,681	4,670 to 5,681
2035 Employees*	2,325	2,180 to 2,678	2,180 to 2,678
Build-Out Population	**	34,643	36,647
Build-Out Households	**	14,435	15,270
Build-Out Employees	**	11,747	9,639
Build-Out Years	**	60 to 94 years	63 to 98 years by
		2075 to 2109	2078 to 2113

 Table 3.2-13 Estimated Twenty-Year and Build-Out Population, Households, and Employment Projections

\* Projections assume 1.5 percent to 2.5 percent annual growth rate for the action alternatives from the time the rezoning is adopted.

\*\* For Alternative 1—No Action, only projections through the twenty-year horizon of 2035 were analyzed. Build-Out was not analyzed because the timeframe is for this is unknown and difficult to approximate.



	Alternative 1—	Alternative 2—	Alternative 3—
	No Action	Connecting	Compact
		Corridors	Community
2035 Population	+2,719	+2,886 to +5,314	+2,886 to +5,314
2035 Households	+1,133	+1,203 to +2,214	+1,203 to +2,214
2035 Employees	+730	+585 to +1,083	+585 to +1,083
<b>Build-Out Population</b>		+26,322	+28,326
Build-Out Households		+10,968	+11,803
Build-Out Employees		+10,152	+8,044

#### Table 3.2-14 Projected Net Increases in Population, Households, and Employment over Current (2015) Levels

The net increase in the number of households projected for the next twenty years would be 1,203 at 1.5 percent growth and 2,214 at 2.5 percent growth under all action alternatives. Although the market assessment projected a demand for 500-800 or more households through 2035, this was a conservative estimate. If the subarea supported 25 percent of the city's forecasted housing growth, the projection would be 1,450 additional units. There is also the potential that housing growth could occur more rapidly than projected given Seattle population growth in recent years. Zoning that provides more capacity for growth than projected provides flexibility to respond to market characteristics and homeowner preferences in the subarea.

## **The Next Twenty Years**

By 2035, any of the action alternatives would be anticipated to grow at the same pace (applying the estimated annual growth rate of around 1.5 percent to 2.5 percent). It is anticipated that Alternative 2—Connecting Corridors or Alternative 3—Compact Community would build-out at a similar pace over time.

Over the next twenty years, under either of these two action alternatives, it is anticipated that the population of the subarea

would grow to between 11,207 and 13,635 people. This would be 2,886 to 5,314 above the current population in the subarea (including population within the TAZ boundaries that encompass the subarea).

A total of 4,670 to 5,681 households would be expected by 2035, as well as approximately 2,180 to 2,678 jobs under either of the two action alternatives. This would be an increase in households



of approximately 1,203 to 2,214 and an increase in jobs of approximately 585 to 1,083 over today's levels.

## Alternative 1—No Action

Under Alternative 1, based on recent population and employment growth forecasts studied in the development of the City's Transportation Master Plan (dispersed option for growth), population in the subarea would grow to approximately 11,040 people. Current population in the subarea is estimated at 8,321 people, so under Alternative 1—No Action, it is estimated that there would be an additional 2,719 people by 2035.

Assuming an average of 2.4 people per household, there would be 4,600 households and 2,325 jobs within the station subarea by 2035 under Alternative 1. This compares to a current levels of 3,467 households and 1,595 jobs in the station subarea. As such, under Alternative 1—No Action, an additional 1,133 households and 730 jobs would occur in the subarea by 2035 approximately.

The anticipated growth in employment would not be effective in helping to address Shoreline's target range of between 5,800 and 7,200 jobs by 2035 and achieving a better jobs-to-housing balance. Most growth in employment would need to occur elsewhere in the city. A review of citywide zoning confirms that the city does have the capacity elsewhere to accommodate the employment target range.

## Alternative 2—Connecting Corridors

Under Alternative 2, the population would increase to 34,643 total at full build-out of the proposed zoning. Approximately

14,435 households and 11,747 jobs could be accommodated within the station subarea at full build-out. As such, this alternative would add potentially 26,322 people, 10,968 households, and 10,152 jobs to the subarea above the current levels. It is anticipated that full build-out of Alternative 2— Connecting Corridors would take approximately 60 to 94 years (2075 to 2109) to be realized.

## Alternative 3—Compact Community

Under Alternative 3, the population would increase to 36,647, and approximately 15,270 households and 9,639 jobs could be accommodated in the station subarea at full-build out of proposed zoning. As such, this alternative would add potentially 28,326 people, 11,803 households and 8,044 jobs in the subarea above current levels. It is anticipated that full build-out would take approximately 63 to 98 years (2078 to 2113).

# Consistency with Housing and Employment Policies and Housing Choice Opportunities

Consistency with plans and policies is addressed in Section 3.1 of this DEIS. It is worth emphasizing in this section, however, that Alternative 3—Compact Community would provide the most long term housing choice opportunities, as well as the greatest potential for affordable housing because it would result in the most households at full build-out. (Alternative 2 would have 835 fewer households at build-out than Alternative 3. Alternative 1— No Action would have substantially fewer households than either of the two action alternatives (see tables above).

With adoption of one of the action alternatives over time, a wider variety of housing types (multifamily and single family)



would be developed and there would be an increase in number households and increased diversity in the subarea. The range of housing types would be affordable to a wider diversity of income levels. With proposed density and building heights that support mixed use development with housing over several stories, there is a high likelihood that a variety of for sale and for rent housing accommodations would be offered.

The City intends to apply a variety of requirements and incentives to encourage affordable housing in the subarea. In addition the City will partner with other organizations to promote greater housing choice and affordability. One incentive includes transportation impact fee ordinance adopted by City Council in August 2014 that included an exemption for affordable housing. Other incentives would include reduced parking requirements for affordable housing and bonus height/density allowances (refer to 3.2.3 Mitigation Measures).

# **Economic Development Opportunities**

The greatest opportunities for residentially-driven economic development (more residents in the area spending at local businesses, shops, restaurants, etc.) would occur under Alternative 3. The greatest opportunity for employment and jobs related economic development would occur under Alternative 2, because it would result in the most of jobs of the two action alternatives. However, the projected number of jobs under Alternative 3 is significant, and adoption of either of the action alternatives would help the City achieve its employment growth targets and improve its jobs-to-housing ratio. Increased population base and households would support funding for capital improvements and new development would provide jobs for residents of the neighborhood, Shoreline, and the region.

Under Alternative 1, economic development growth through increases in population and job opportunities would be minimal.

# **Property Values and Property Taxes**

How implementation of light rail and rezoning might affect property values and property taxes in the subarea was a common question of existing homeowners during the subarea planning process.

The potential for a new transit station to increase land values for properties adjacent to it is a topic that has been researched extensively over the past two decades in conjunction with the construction of numerous light rail and heavy rail systems across the US, often in the context of determining a "value premium" that can be "captured" to contribute to system financing. While use of "value capture" for financing is not envisioned for the Lynnwood Link extension, the research that has been conducted on this topic provides information to address questions raised by Shoreline residents near the new station site as to what impact the station might have on their property values, and potentially their property taxes.

# **Value Premium Impacts**

A substantial amount of research and analysis has been undertaken by policy experts to track and document the effects of fixed guideway transit systems (e.g., term includes heavy rail and light rail) on property values. This topic has commanded so



much attention because many policymakers believe that fixed guideway transit systems create a value premium, i.e. an increase in property values or related economic factors as a result of the increased access and desirability of the land served by the fixed guideway transit. If increased value can be linked to the transit investments, a portion of this increase sometimes has the potential to be "captured" up front in the transit development process, and converted to a funding source for public improvements that support the transit system. Numerous studies have used statistical models and other methods to examine whether premiums exist for real estate prices or lease rates near transit stops, particularly for commuter and light rail systems. A summary of various fixed guideway transit value premium studies was published in 2008 by the Center for Transit Oriented Development, a non-profit organization associated with Reconnecting America. Entitled Capturing the Value of Transit, the publication reviews the concepts associated with this topic, and summarizes the findings of more than 20 analyses of the effect of fixed guideway transit on different land uses around the US. Many of these studies, in turn, identified a range of value premiums associated with fixed guideway transit, and utilized a variety of techniques to come to this conclusion.

A 1995 study, by Dr. John Landis at the University of California, Berkeley, found that values for single family homes within 900 feet of light rail stations in Santa Clara County were 10.8 percent lower than comparable homes located further away, and no value premium could be identified for commercial properties within one-half mile of BART stations in the East Bay of the San Francisco Bay Area. Compared to other research though, the potential for decrease in values is rare and likely influenced by other factors. One of the most thorough analyses conducted after 2000, when contemporary fixed guideway transit systems had established their resurgence as a modern, desirable form of transportation in urban America, was conducted by Dr. Robert Cervero at the University of California, Berkeley. This study, a survey of other studies covering only housing value premiums associated with fixed guideway transit, found that among the seven locations (Philadelphia, Boston, Portland, San Diego, Chicago, Dallas, and Santa Clara County), value premiums ranged from 6.4 to over 40 percent. The authors concluded that value premiums depended on a variety of factors, including traffic congestion, local real estate market conditions, and business cycles.

Transit in Europe can also provide insight to ways of measuring value capture. A study of 15 light rail systems in France, Germany, the United Kingdom, and North America measured housing prices, residential rent, office rent, and property values in each of the cities, concluding that there was a positive value premium in all but two cities. These two cities initially experienced negative value impacts from fixed guideway transit due to the noise associated with the light rail system. Technological improvements have since reduced noise levels and most modern light rail systems are fairly quiet.

One key aspect of the literature is the separation of fixed guideway transit's impacts on existing real estate versus its impacts on new development. In many situations, once a fixed guideway transit system is planned, local governments also increase zoning densities or implement policies that densify allowable development. This makes sense, because fixed guideway transit allows the movement of people without



commensurate automobile traffic impacts. However, studies of value premiums often face the challenge of controlling the analysis for changes in zoning (to allow for denser development) and the effects of related development policies. Conversely, increases in allowable development through denser zoning, even in the absence of fixed guideway transit, will almost always result in a higher land value, because a developer can build more units on the same site under the increase in allowed density.

Based on the analysis of value premiums, and considering the range of outcomes for previous projects, it would be reasonable to assume a potential value premium ranging from five percent up to 10 percent for properties located within one-half mile of the new transit station (one-half mile is considered the point at which resident interest in walking to a transit station substantially decreases). This value premium would represent a one-time increase in values that would be associated with a new transit station, and would also capture the benefit of changes in zoning and other City implementation actions to encourage TOD projects.

# **Property Tax Impacts**

An increase in property values does not result in a proportional increase in property taxes (e.g., a five percent increase in property value leading to a five percent increase in property taxes) due to the overlapping effects of three state constitutional and statutory measures:

• One-Percent Constitutional Limit: the State Constitutions limits the regular combined property tax rate for all agencies to one percent, except for voter approved levies

for schools or other agencies (such as the increase in the tax rate approved by Shoreline voters in 2010);

- Levy Increase Limit: Taxing districts, such as cities, are limited to a levy limit (limit on increase in property tax revenues) of no more than one percent of prior year property tax revenues, except for increases due to new construction, annexation, or voter approved increases; and
- Levy Amount Limit: There is a statutory limit on the maximum total levy for various types of taxing districts. The current maximum amount for cities is 0.59 percent of assessed value, excluding any voter-approved additional levies.

King County reassesses properties to fair market value on an annual basis. However, because of the One-Percent Constitutional Limit and Levy Amount and Levy Increase Limits, an increase in property values and assessed values does not automatically lead to an equivalent increase in property taxes.

For example, each taxing district must on an annual basis adjust its levy (property tax) rate so that the increase in property taxes, excluding new construction, annexations, or voter-approved increases, does not exceed one percent. Other adjustments to levy rates may need to be made to stay within the One-Percent Constitutional and Levy Amount limits.

As described previously, there may be a potential for a *one-time* increase of between five to ten percent in property values within one-half mile of the NE 145th Street Station. The one-time



increase in property values will need to be evaluated against overall changes in Shoreline property values to determine how it would impact property taxes for homeowners around the new NE 145th Street Station. For example, if the new NE 145th Street Station leads to a five percent increase in value, but this occurs in a hot real estate market where property values are increasing at a faster rate on an annual basis, the increase in assessed values for properties around the station may be driven more by market conditions than the new transit station.

Only in a flat market could homeowners around the new station possibly experience a one-time increase in property tax rates that could approach the rate of increase in property values. It should be noted that an increase in property values represents a 100 percent increase in homeowner equity.

Because of the complexity of the overlapping limits, it is not possible to make a specific forecast for how much property taxes might increase around the station area. Instead, one would need to run a series of multiple scenarios with varying assumptions for market-based increases in property values, the increase in the value of properties around a new transit station, and evaluation of how the constitutional and statutory limits affect Shoreline to determine a projection for a range of possible outcomes.

For homeowners who might be severely affected by a property tax increase, King County operates several programs to assist homeowners who may face difficulty paying property taxes for any reason. This includes a property tax exemption for senior citizens and disabled persons, based on household income, that freezes valuation and can create some exemptions from regular property taxes. Another program provides property tax deferrals for homeowners with limited income.

The State also provides a property tax deferral program, administered by county assessors, that allows for full or partial deferral of property taxes. Another State program provides means-tested direct grant assistance for property tax payments to seniors and disabled persons who are widows or widowers of veterans, which for eligible households could help offset an increase in property taxes if it occurs.

# 3.2.3 Mitigation Measures

# Affordable Housing

With adoption of either action alternative, there would be an ongoing need to require and encourage affordable housing in the subarea. The City has drafted specific policies and development provisions for the subarea plan related to affordable housing. These are provided on the following pages for reference.

# **Draft Subarea Plan Policies for Housing**

The following potential policies are DRAFT, under consideration by the City of Shoreline, and not yet adopted. Therefore, these policies may be subject to change prior to final adoption.

- Develop the systems necessary to implement and administer the City's new affordable housing program.
- Investigate financing and property aggregation tools to facilitate creation of affordable housing.



Note: This policy should not be construed to mean use of eminent domain. It provides guidance to examine potential tools recommended by partner organizations, which were more complex than those included in draft Development Code regulations for the subarea plan.

# Draft Development Code Provisions Related to Housing

The following potential Development Code provisions are DRAFT, under consideration by the City of Shoreline, and not yet adopted. Therefore, these provisions may be subject to change prior to final adoption.

#### 20.20.010 A definitions.

#### **Affordable Housing**

Housing reserved for occupancy to households whose annual income does not exceed a given percent of the King County median income, adjusted for household size, and have housing expenses no greater than thirty (30) percent of the same percentage of median income. For the purposes of Title 20, the percent of King County median income that is affordable is specified in SMC 20.40.235.

## 20.20.016 D definitions.

#### Dwelling, Live/Work

Live-work unit means a structure or portion of a structure: (1) that combines a commercial activity that is allowed in the zone with a residential living space for the owner of the commercial or

manufacturing business, or the owner's employee, and that person's household; (2) where the resident owner or employee of the business is responsible for the commercial or manufacturing activity performed; and (3) where the commercial or manufacturing activity conducted takes place subject to a valid business license associated with the premises.

## 20.20.024 H definitions.

#### Housing Expenses, Ownership Housing

Includes mortgage and mortgage insurance, property taxes, property insurances, and homeowner's dues.

#### Housing Expenses, Rental Housing

Includes rent and appropriate utility allowance.

#### **Household Income**

Includes all income that would be included as income for federal income tax purposes (e.g. wages, interest income, etc.) from all household members over the age of eighteen (18) that reside in the dwelling unit for more than three (3) months of the year.

## 20.30.355 Development Agreement (Type L).

C. Development Agreement Contents for Property Zoned MUR-85' and potentially MUR-65' in order to achieve increased development potential: Each Development Agreement approved by the City Council for property zoned MUR-85' and MUR-65' shall contain the following:



 20 percent of the housing units constructed onsite shall be affordable to those earning less than 60 percent of the median income for King County adjusted for household size for a period of no less than 50 years. The number of affordable housing units may be decreased to 10 percent if the level of affordability is increased to 50 percent of the median income for King County adjusted for household size. A fee in lieu of constructing the units may be paid into the City's affordable housing program instead of constructing affordable housing units onsite. The fee is specified in SMC Title 3.

#### 20.40.235 Affordable housing, Light Rail Station Subareas.

A. The purpose of this index criterion is to implement the goals and policies adopted in the Comprehensive Plan to provide housing opportunities for all economic groups in the City's Light Rail Station Subareas. It is also the purpose of this criterion to:

1. Ensure a portion of the housing provided in the City is affordable housing;

- Create an affordable housing program that may be used with other local housing incentives authorized by the City Council, such as a multifamily tax exemption program, and other public and private resources to promote affordable housing;
- 3. Use increased development capacity created by the Mixed Use Residential zones to develop voluntary and mandatory programs for affordable housing.

B. Affordable housing is permitted and voluntary in MUR-35', and required in MUR-45', MUR-65', and MUR-85'. The following provisions shall apply to all affordable housing units required by, or allowed through, any provisions of the Shoreline Municipal Code:

1. The City provides various incentives and other public resources to promote affordable housing.

Location	Use		Mandatory or Voluntary Program
Mixed Use Residential – MUR-85'		15% of rental units are affordable to families making 70% or less of the median income for King County adjusted for household size; or 15% of all owned units are affordable to households earning 80% or less of the	Mandatory*

#### Specific regulations providing for affordable housing are described below:



		median income for King County adjusted for household size.	
		<b>Incentives provided:</b> Eligible for Property Tax Exemption Program; and entitlement of 85 foot height and no density limits.	
		<b>Bonus incentive:</b> 10% of the rental units affordable to households earning 80% or less the median income for King County adjusted for household size; or 10% of individual for sale/ownership units affordable to households earning 90% the median income for King County adjusted for household size for the first 300 units in the MUR-85' zone.	
Mixed Use Residential – MUR-65'	Residential	<ul> <li>15% of rental units are affordable to families making 70% or less of the median income for King County adjusted for household size; or</li> <li>15% of all owned units are affordable to households earning 80% or less of the median income for King County adjusted for household size.</li> <li>Incentives provided: Eligible for Property Tax Exemption Program; and entitlement of 65 foot height and no density limits.</li> <li>Bonus incentive: 10% of the rental units affordable to household size; or 10% of less the median income for King County adjusted for household size; or 10% of less the median income for King County adjusted for household size; or 10% of individual for sale/ownership units affordable to households earning 90% the median income for King County adjusted for the first 300 units in the MUR-65' zone.</li> </ul>	Mandatory*
Mixed Use Residential – MUR-45'	Residential	<ul> <li>15% of rental units are affordable to households earning 60% or less of the median income for King County adjusted for household size.</li> <li>15% of all for sale/individual ownership units are affordable to households earning 80% or less of median income for King County adjusted for household size.</li> </ul>	Mandatory*



	Incentive: Eligible for: Property Tax Exemption Program; Permit Fee reduction.	
Mixed Use Residential – MUR-35'	10% of rental units are affordable to families making 60% or less of the median income for King County adjusted for household size. 10% of all for sale/individual ownership units are affordable families making 80% or less of the median income for King County adjusted for household size. Incentive: Eligible for: Property Tax Exemption Program; permit fee reduction.	Voluntary

\* Payment in lieu of constructing mandatory units is available. See SMC 20.40.235(E)(1)

C. **Mixed Use Residential Zone Affordable housing requirements.** The following provisions shall apply to all affordable housing units required by, or created through, any incentive established in the Shoreline Municipal Code unless otherwise specifically exempted or addressed by the applicable code section for specific affordable housing programs or by the provisions of an approved development agreement:

1. Duration: Affordable housing units shall remain affordable for a minimum of fifty (50) years from the date of initial owner occupancy for ownership affordable housing. At the discretion of the Director a shorter affordability time period, not to be less than thirty (30) years, may be approved for ownership affordable housing units in order to meet federal financial underwriting guidelines. 2. Designation of Affordable Housing Units: The Director shall review and approve the location and unit mix of the affordable housing units, consistent with the following standards, prior to the issuance of any building permit:

> a. Location: The location of the affordable housing units shall be approved by the City, with the intent that they are generally mixed with all other dwelling units in the development.

b. Tenure: The tenure of the affordable housing units (ownership or rental) shall be the same as the tenure for the rest of the housing units in the development.

c. Size (Bedroom): The affordable housing units shall consist of a range of the number of bedrooms



that are comparable to the units in the overall development.

d. Size (Square Footage): Affordable housing units shall be the same size as market housing units with the same number of bedrooms unless approved by the Director. The Director may approve smaller units when: (a) the size of the affordable housing is at least ninety (90) percent of the size of the market housing in the project with the same number of bedrooms; and (b) the affordable units are not less than five hundred (500) square feet for a studio unit, six hundred (600) square feet for a one (1) bedroom unit, eight hundred (800) square feet for a two (2) bedroom unit and one thousand (1,000) square feet for a three (3) bedroom unit.

3. Timing/Phasing: The affordable housing units shall be available for occupancy in a time frame comparable to the availability of the rest of the dwelling units in the development unless the requirements of this section are met through SMC 20.40.235(E), Alternative compliance. The affordable housing agreement provided for in SMC 20.40.235(D) shall include provisions describing the phasing of the construction of the affordable units relative to construction of the overall development. If the development is phased, the construction of the affordable units shall be interspersed with the construction of the overall development.

a. Off-Street Parking: Off-street parking shall be provided for the affordable housing units consistent with SMC 20.50.390 unless reduced by the Director in accordance with SMC 20.50.400.

b. Recreation Space: The recreation/open space requirements for housing units affordable to families making 60% or less of Adjusted Median Income for King County shall be calculated at fifty (50) percent of the rate required for market housing.

- Depending on the level of affordability provided the affordable housing units may be eligible for transportation impact fee waivers as provided in SMC 12.40.070(G).
- In the event of a fractional affordable housing unit, payment in lieu in accordance with SMC 20.40.235(E)(1) is allowed for the fractional unit.

D. **Affordable housing agreement**. An affordable housing agreement shall be recorded with the King County Recorder's Office prior to the issuance of a building permit for any development providing affordable housing pursuant to the requirements or incentives of the Shoreline Municipal Code.

 The recorded agreement shall be a covenant running with the land and shall be binding on the assigns, heirs and successors of the applicant.

4. Development Standards:



- 2. The agreement shall be in a form approved by the Director and the City Attorney and shall address price restrictions, homebuyer or tenant qualifications, affordability duration, phasing of construction, monitoring of affordability and any other topics related to the provision of the affordable housing units.
- 3. The agreement may, at the sole discretion of the City, establish a monitoring fee for the affordable units. The fee shall cover the costs to the City to review and process documents to maintain compliance with income and affordability restrictions of the agreement.
- 4. The City may, at its sole discretion, agree to subordinate any affordable housing regulatory agreement for the purpose of enabling the owner to obtain financing for development of the property.

E. Alternative compliance. The City's priority is for residential and mixed use developments to provide the affordable housing on site. The Director, at his/her discretion, may approve a request for satisfying all or part of a project's on-site affordable housing with alternative compliance methods proposed by the applicant. Any request for alternative compliance shall be submitted at the time of application and must be approved prior to issuance of any building permit. Any alternative compliance must achieve a result equal to or better than providing affordable housing on site.

 Payment in Lieu of constructing mandatory affordable units – Payments in lieu of constructing mandatory affordable housing units are subject to the following requirements: a. Payments in lieu of constructing for sale/individual ownership units shall be based on the difference between the price of a typical market rate unit, and the price an income constrained household as defined in SMC 20.40.235(B)(1) can pay for the same unit adjusted for household size. Payments in lieu of construction for rental units shall be based on the present net value of the difference between the market and affordable rents as defined in SMC 20.40.235(B)(1) for the same units adjusted for household size. The fee shall be updated in the fee ordinance as part of the City's budget process.

b. The payment obligation shall be due prior to issuance of any certificate of occupancy for the project. Collected payments shall be deposited in the City's Housing Trust Fund account.

- 2. Any request for alternative compliance shall:
  - a. Include a written application specifying:

i. The location, type and amount of affordable housing; and

ii. The schedule for construction and occupancy;

b. If an off-site location is proposed, the application shall document that the proposed location:

i. Is within a ¼ mile radius of the project triggering the affordable housing requirements or the proposed location is equal to or better than providing the housing on site or in the same neighborhood;



ii. Is in close proximity to commercial uses, transit and/or employment opportunities;

c. Document that the off-site units will be the same type and tenure as if the units were provided on site; and

d. Include a written agreement, signed by the applicant, to record a covenant on the housing sending and housing receiving sites prior to the issuance of any construction permit for the housing sending site. The covenants shall describe the construction schedule for the off-site affordable housing and provide sufficient security from the applicant to compensate the City in the event the applicant fails to provide the affordable housing per the covenants and the Shoreline Municipal Code. The intent is for the affordable housing units to be provided before, or at the same time as, the on-site market housing. The applicant may request release of the covenant on the housing sending site once a certificate of occupancy has been issued for the affordable housing on the housing receiving site.

#### 20.40.245 Apartments

Apartments are allowed in the MUR zones. Microapartments are not allowed in the MUR zones. Microapartments are defined as a structure that contains single room living spaces with a minimum floor area of 120 square feet and a maximum floor area of 350 square feet. These spaces contain a private bedroom and may have private bathrooms and kitchenettes (microwaves, sink, and small refrigerator). Full scale kitchens are not included in the single room living spaces. These single room living spaces share a common full scale kitchen (stove, oven, full sized or multiple refrigeration/freezers), and may share other common areas such as bathroom, shower/bath facilities, and recreation/eating space.

Refer to Title 20 Development Code of the Shoreline Municipal Code, and in particular 20.30 General Development standards for additional information pertaining to regulations for housing and mixed use development.

# **Other Recommended Mitigation Measures**

- The City would continue to monitor and support economic development opportunities in the subarea.
- The City would explore public/private and public/public partnerships for redevelopment that might help to encourage and catalyze growth.
- The City would prioritize investment of capital improvements related to transportation, infrastructure,



public parks, and other facilities in the subarea to support growth for the next twenty years and over the long term.

# **3.2.4 Significant Unavoidable Adverse** Impacts

Implementation of either action alternative, Alternative 2— Connecting Corridors or Alternative 3—Compact Community would provide increased opportunities for housing, including affordable housing and a variety of housing choices to fit various income levels. Redevelopment also would create jobs and economic development opportunities over time. Overall at full build-out, Alternative 3 would provide the most housing opportunities and Alternative 2 would provide the most employment opportunities. These increases would help the City in achieving its established growth targets and improving the jobs-to-housing ratio.

With the planned growth in the subarea, some single family homeowners may decide to move because of concerns over how the neighborhood may change over time, and potential increases in property values could benefit them in this process. On the other hand, if property taxes increase, this could be an added burden on some residents.

Overall with the gradual pace of growth expected, continual monitoring of conditions in the subarea by the City, and implementation of the mitigation measures, significant adverse unavoidable impacts would not be anticipated. The concern with implementing Alternative 1—No Action would be that it is not consistent with adopted goals, policies, and objectives at the state, regional, and local levels to support growth management and integrated land use and transportation planning in high-capacity station areas.



# **3.3 Transportation**

This section describes the affected environment, analyzes potential impacts, and provides recommendations for mitigation measures for multimodal transportation, including motor vehicle traffic, transit, bicycle, and pedestrian modes. Parking conditions are also analyzed.

# **3.3.1 Affected Environment**

# Introduction

Existing conditions of the multimodal transportation network are described and illustrated on the following pages, along with planned conditions for the future as outlined in adopted transportation plans. They include an assessment of the current infrastructure and operating conditions for all transportation modes. Additionally in this section, impacts to transportation facilities and services resulting from the proposed land use alternatives are assessed to determine appropriate mitigation measures needed to accommodate the changes. In order to provide relevant details and constructive analysis, the project team conducted field visits, utilized existing data (such as traffic counts and transit timetables) and reviewed relevant plans for the area, including:

- 2013 Sound Transit Draft Environmental Impact Statement (DEIS) for the Lynnwood Link Extension
- City response letter to the 2013 Sound Transit Draft Environmental Impact Statement (DEIS) for the Lynnwood Link Extension

- 2011 Shoreline Transportation Master Plan (TMP) and amendments
- 2012 Shoreline Comprehensive Plan (CP)
- City of Shoreline Vision 2029 Plan
- 2013 PSRC Growing Transit Communities Report (GTC)
- 2012 King County Metro Strategic Plan
- 2011 Community Transit Long Range Plan
- 2014 Sound Transit Long Range Plan Update
- 2015-2020 Capital Improvement Plan (CIP)
- 2015-2020 Transportation Improvement Plan (TIP)

# **Existing Street Network**

# **Regional Access**

Interstate 5 (I-5) is a limited access freeway classified as a highway of statewide significance. It provides access from the transportation study area south to Northgate, the University District, Capitol Hill and Downtown Seattle and beyond as well as to Mountlake Terrace, Lynnwood and points north. Additionally, I-5 serves as the key corridor for express regional bus service in the area. The nearest access point to I-5 from the study area is the NE 145th Street interchange, located at the southern edge of the study area.



### Subarea Street Network

SR 99/Aurora Avenue N is a managed access highway and is also classified as a highway of statewide significance. It serves as a principal arterial in Shoreline. It lies directly west of the study area, providing north-south mobility and business access along the corridor.

The principal arterials in the study area are N/NE 145th Street and 15th Avenue NE, which form the southern and eastern edges. NE 145<sup>th</sup> Street is a state highway (SR 523) from I-5 to SR 522. N/NE 145<sup>th</sup> Street is not located within the City of Shoreline. The northern half of the right-of-way is located in unincorporated King County and the southern half of the right-of-way is located in the City of Seattle. Minor arterials within the study area include Meridian Ave N, N/NE 155th Street and 5th Avenue NE. Figure **3.3-1** highlights the street classifications of the roadways within the study area. The proposed light rail station location is identified on the map immediately east of I-5 and north of NE 145<sup>th</sup> Street. The area is composed of a mostly gridded network. The non-arterial street grid is broken in many places by the presence of parks. Crossings of I-5 are limited, with the only eastwest connections located along N/NE 145th Street and N/NE 155th Street.

# **Existing Roadway Operations**

### **Concurrency Management System**

The Washington State Growth Management Act (GMA) includes a transportation concurrency requirement. This means that jurisdictions must provide adequate public facilities and services to keep pace with a community's growth over time to maintain the Level of Service (LOS) goals stated in a community's

comprehensive plan. The improvements can include capital improvements, such as intersection modifications, or other strategies such as transit service expansion or transportation demand management. As part of the process, a jurisdiction evaluates the operations of roadway segments or intersections in order to determine the relative impact from new development on the transportation network. The City of Shoreline has an adopted concurrency methodology to balance growth, congestion, and capital investment.

### Level of Service Criteria for Intersections

A common metric to evaluate intersection operations is average seconds of delay per vehicle, which can be translated into a grade for Level of Service (LOS) as shown in Table 3.3-1. An additional metric is the evaluation of a roadway segment via the volume-tocapacity (V/C) ratio, which compares a roadway's vehicle demand against the theoretical capacity of that segment. These V/C ratios can also be translated into LOS grades as shown in the table. The LOS concept is used to describe traffic operations by assigning a letter grade of A through F, where A represents free-flow conditions and F represents highly congested conditions. As shown in Table 3.3-2, the City has adopted LOS D for signalized intersections on arterials, unsignalized intersecting arterials and roadway segments on Principal and Minor Arterials<sup>1</sup>. Because it is not located within the City of Shoreline and is also a state highway between I-5 and SR 522, N/NE 145<sup>th</sup> Street is not subject to the City of Shoreline's LOS standards.



<sup>&</sup>lt;sup>1</sup> Average delay at signalized intersections is based on all vehicles that approach the intersection. Average delay for unsignalized intersections is based on the delay experienced by vehicles at the stop-controlled approaches.

Level of Service (LOS)	Signalized Intersection Delay per Vehicle (seconds)	Unsignalized Intersection Delay per Vehicle (seconds)	Roadway Segment Volume- to-Capacity ratio (V/C)
А	< 10	< 10	<.60
В	> 10 to 20	> 10 to 15	.6070
С	> 20 to 35	> 15 to 25	.7080
D	> 35 to 55	> 25 to 35	.8090
E	> 55 to 80	> 35 to 50	.90 – 1.0
F	> 80	> 50	> 1.0

Table 3.3-1 Level of Service Criteria For Intersection And Roadway Analysis

Source: 2010 Highway Capacity Manual and the 2011 City of Shoreline Transportation Master Plan

#### Table 3.3-2 Level of Service Standards by Agency

Agency	LOS Standard
City of Shoreline	LOS D for signalized intersections LOS D for unsignalized intersecting arterials V/C ratio of .90 (LOS D) for principal and minor arterials <sup>2</sup>
City of Seattle	LOS D (goal)
WSDOT	LOS D for highways of statewide significance (HSS) LOS E/mitigated for regionally significant state highways (non-HSS)

<sup>2</sup> The City allows a V/C ratio of 1.10 for 15<sup>th</sup> Avenue NE, between NE 150<sup>th</sup> Street and NE 175<sup>th</sup> Street due to rechannelization for operational safety



### **Traffic Volumes**

The existing conditions analysis uses data from the 2011 TMP update to describe current traffic operations and supplements it with more recent vehicle counts. Traffic counts were obtained from the City of Seattle, WSDOT, and the City of Shoreline and were also collected by the project team in July 2014. **Figure 3.3-2** and **Table 3.3-3** show existing traffic volumes and LOS values within the study area. N/NE 145<sup>th</sup> Street corridor has the highest east-west volume and carries over 30,000 vehicles per day. 15<sup>th</sup> Avenue NE is the busiest north-south corridor, with over 16,000 average daily trips (ADT). All segments in the study area currently operate within WSDOT or Shoreline LOS standards.

### Intersection Evaluation

During the PM peak hour, all intersections within the study area currently operate within Shoreline and WSDOT adopted LOS standards as shown in **Figure 3.3-3**. The most congested intersection is located at NE 145<sup>th</sup> Street and 15<sup>th</sup> Avenue NE, which operates at LOS E. While most intersections along N/NE 145<sup>th</sup> Street operate at LOS D or better, some individual movements experience higher levels of delay than an overall intersection LOS D would suggest. This includes the northbound left and westbound through movements at the NE 145<sup>th</sup> Street / 5<sup>th</sup> Avenue NE intersection.

# **Collision History**

As shown in **Figure 3.3-4**, some intersections in the study area have a relatively high number of vehicle collisions; experiencing a crash rate above 1.0 per million entering vehicles (MEV)<sup>3</sup>. The intersection of N 145<sup>th</sup> Street and Meridian Avenue N averaged 12 collisions per year, or 1.39 collisions per MEV (col/MEV), with a high number of rear-end, left-turn, right-angle, and sideswipe collisions. NE 145<sup>th</sup> Street and 5<sup>th</sup> Avenue NE experienced 16 collisions per year, a rate of 1.18 col/MEV. NE 145<sup>th</sup> Street and 15<sup>th</sup> Avenue NE had 12 collisions per year, a rate of .90 col/MEV. With a high number of rear-end and right-angle collisions. Additionally, the unsignalized intersection of 5<sup>th</sup> Avenue NE and the I-5 Northbound on-ramp averaged 7 collisions per year, a collision rate of 1.37 col/MEV. All other intersections in the study area averaged fewer than 10 collisions per year. The collision rate for the entirety of the 145<sup>th</sup> Street corridor is 6.03 per million vehicle miles of travel, more than two and a half times higher than the 2010 Northwest Region average collision rate of 2.27 for Urban Principal Arterials.

Between 2011 and 2013, there were 15 pedestrian and bicycle collisions within the study area, with five of the collisions located along N/NE 145<sup>th</sup> Street. Five collisions occurred along N 155<sup>th</sup> Street while three were located along 15<sup>th</sup> Avenue NE.



<sup>&</sup>lt;sup>3</sup> Information provided by Sound Transit DEIS for the Lynnwood Link Extension using collision data from 2008 to 2011

Street	Segment	Average Daily Traffic	PM Peak Hour Volume⁴	PM Peak hour Volume-to- Capacity Ratio
East-West Corridors				, _
N/NE 145th Street	West of I-5	25,240	1,331	0.81
NE 145th Street	East of I-5	31,790	1,431	0.87
N 155th Street	West of I-5	11,640	538	0.60
NE 155th Street	East of I-5	9,900	486	0.61
North-South Corridors				
5th Avenue NE*	I-5 NB on-ramp to NE 155th Street	7,170	530	0.76
15th Avenue NE	NE 145th to NE 150th Street	16,130	1,038	0.52
15th Avenue NE**	NE 150th to NE 155th Street	14,240	881	0.73
Meridian Avenue N	145th to 155th Street	6,220	392	0.56

#### Table 3.3-3 Average Daily Traffic and PM Peak Hour Congestion For Existing Conditions

Source: 2011 City of Shoreline Transportation Master Plan and updated traffic counts from 2014

\*Note that the portion of 5<sup>th</sup> Avenue NE between NE 145<sup>th</sup> Street and the I-5 northbound on-ramp is exempt from the City of Shoreline's concurrency standard due to the need to make modifications to an intersection that is currently outside of the City's jurisdiction.

\*\*The City allows a V/C ratio of 1.10 for 15<sup>th</sup> Avenue NE, between NE 150<sup>th</sup> Street and NE 175<sup>th</sup> Street due to rechannelization for operational safety

<sup>&</sup>lt;sup>4</sup> One-directional volume only, signifying the direction with the highest volume

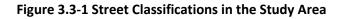






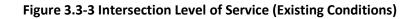




Figure 3.3-2 Average Daily Traffic and PM Peak Congestion (Existing Conditions)

Sources: City of Shoreline, WSDOT, City of Seattle and updated traffic counts from 2014







Sources: City of Shoreline, WSDOT, City of Seattle and updated traffic counts from 2014

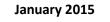






Figure 3.3-4 Accident Rate (Existing Conditions)

Sources: Sound Transit Lynnwood Link Extension DEIS , WSDOT



# **Transit Service Provision**

### **Existing Conditions**

The transit coverage within the study area is provided by King County Metro and Sound Transit. Table 3.3-4 details the current headways and destinations serviced by routes that traverse the area while Figure 3.3-5 highlights the location of the routes. There are many transit routes with service within and in the vicinity of the study area, both in the peak and off-peak time periods. Peak-period routes connect the study area with regional growth centers such as Downtown Seattle, the University of Washington, Northgate, Bellevue and Redmond. All-day service is primarily provided along the north-south corridors within the study area. Sound Transit provides all-day service from downtown Seattle to Lynnwood and Everett, with a stop at the NE 145<sup>th</sup> Street freeway station. However this route does not serve the freeway station in the peak travel direction during the peak periods (i.e. there is no service at the southbound stop during the a.m. peak and there is no service at the northbound stop during the p.m. peak). There is no all-day east-west route that travels the entire length of the 145<sup>th</sup> Street corridor between Aurora Avenue and Lake City. The only east-west all day service in the study area is along N/NE 155<sup>th</sup> Street. While Sound Transit routes 510, 511 and 513 and a number of Community Transit routes pass by the study area along I-5, they do not stop at the 145<sup>th</sup> Street freeway station.

### **Planned Transit Service**

While the City of Shoreline does not have direct control over the transit service within its borders, a number of conceptual

modifications with light rail deployment are identified in the TMP. The TMP specifies that bus service be redirected to better connect to the station once service begins, especially along N/NE 145<sup>th</sup> Street. The City will be engaged with King County Metro and Sound Transit over the next two years as part of the development of a Transit Service Integration Plan. The Lynnwood Link Extension DEIS analysis assumed that three King County Metro routes would serve the NE 145<sup>th</sup> Street Station with 15 minute peak headways and 15-20 minute off-peak headways. Additionally, the DEIS forecast 2,200-3,400 daily light rail station boardings at the NE 145<sup>th</sup> Street Station. The DEIS noted that long-distance/commuter bus routes near the 145<sup>th</sup> Street Station could be rerouted to connect with the light rail station as a transfer point in order to provide a faster and more frequent trip.



Route	Wee	kday Headv	day Headways (in minutes)		
	AM Peak (6-9am)	Midday	PM Peak (3-6pm)	Evening	Destinations Served
All-day Rou	tes				
КСМ 330	60	60	60	60	Shoreline Community College, Lake City
KCM 346	30	30	30	60	Aurora Village, Meridian Park, Northgate
KCM 347	30	30	30	60	Northgate, Ridgecrest, North City, Mountlake Terrace
KCM 348	30	30	30	60	Richmond Beach, North City, Northgate
ST 512	15	15	15	15-30	Everett, Lynnwood, Mountlake Terrace, University District, Downtown Seattle
Peak Perioc	Routes				
КСМ 77	15-25	-	15-30	-	North City, Maple Leaf, Downtown Seattle
KCM 242	30	-	30	-	Northgate, Ravenna, Montlake, Bellevue, Overlake
KCM 301*	15**	-	15**	-	NW Shoreline, Aurora Village, Shoreline Park and Ride, Downtown Seattle
КСМ 303	15	-	15	60**	Shoreline Park and Ride, Aurora Village Transit Center, Meridian Park, Northgate, Downtown Seattle, First Hill
KCM 304	20-30	-	20-30	-	Richmond Beach, Downtown Seattle
KCM 308	30	-	30	-	Lake Forest Park, Lake City, Downtown Seattle
KCM 316	15-20	-	15-25	-	Meridian Park, Bitter Lake, Green Lake, Downtown Seattle
KCM 373	15	-	15	60**	Aurora Village Transit Center, Shoreline Park and Ride, Meridian Park, University District

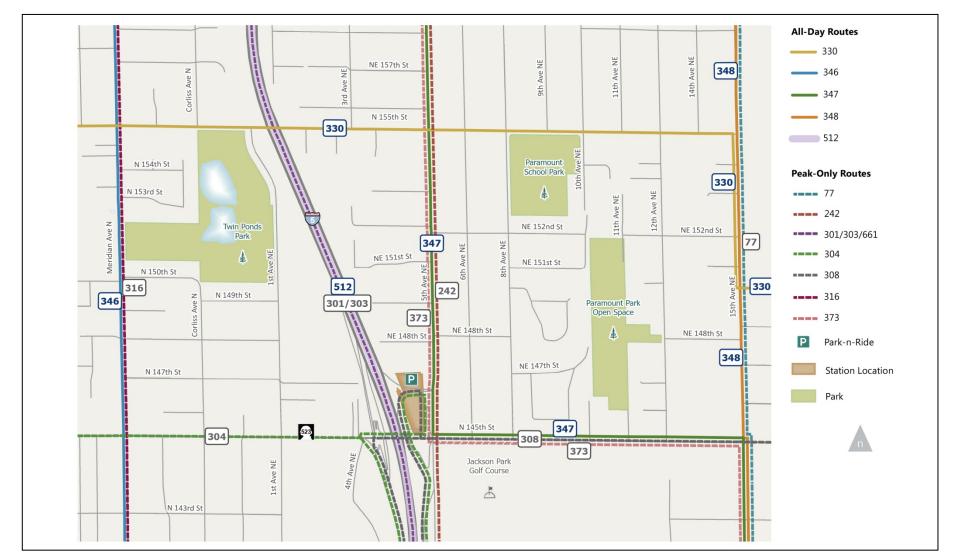
#### Table 3.3-4 Existing Transit Service

Source: King County Metro, 2014

\* This route provides bi-directional service during the a.m. and p.m. peak periods. Not all trips serve the 145<sup>th</sup> Street freeway station during the peak periods.

\*\*One outbound trip to Shoreline after 6 pm.





#### Figure 3.3-5 Existing Transit Service



# **Existing Parking Conditions**

### **Existing On-Street Parking Conditions**

A substantial portion of the study area is residential in character and does not have on-street parking restrictions. Streets within the study area where parking is restricted include the main corridor of N/NE 145<sup>th</sup> Street, portions of 1<sup>st</sup> Avenue NE between N 145<sup>th</sup> Street and N 155<sup>th</sup> Street, 5<sup>th</sup> Avenue NE south of the I-5 northbound on-ramp, and 15<sup>th</sup> Avenue NE between NE 145<sup>th</sup> Street and NE 155<sup>th</sup> Street. The Sound Transit DEIS evaluated parking supply and utilization for an area within a quarter-mile of the proposed station<sup>5</sup>. The study determined that there were 450 unrestricted on-street spaces and 350 off-street spaces in total with a utilization rate of 27 percent for the on-street spaces and 71 percent for the off-street locations.

Due to the limitations of the midday evaluation and the geographic area covered, a qualitative assessment was conducted for this DEIS during the periods in which residential on-street parking utilization is typically higher, such as evenings and weekends<sup>6</sup>. Within the study area, there are approximately 1,950 on-street spaces available. Utilization was observed to be between approximately 10 percent and 20 percent for a majority of the non-arterial streets, with higher utilization of 20 and 30 percent observed along 6<sup>th</sup> Avenue NE.

### Park-and-Ride Facilities

King County Metro owns and operates the 68 space North Jackson Park park-and-ride lot at 14711 5<sup>th</sup> Avenue NE. This lot generally is 100% utilized<sup>7</sup>. As part of the Lynnwood Link Extension Preferred Alternative, a 500 space parking garage will be located on the eastern edge of I-5 just north of NE 145<sup>th</sup> Street in the WSDOT right-of-way and the existing park-and-ride area. The Sound Transit DEIS assumed that the garage would be fully utilized during the daytime hours. During the PM peak hour, the DEIS estimated that 180 vehicles would exit the garage and 45 would enter. During the AM peak hour, it was estimated that 200 vehicles would enter the garage and 50 would exit.

<sup>&</sup>lt;sup>5</sup> Data were collected mid-week in May 2012. Utilization was counted between 9 am and 11 am and between 1 pm and 4 pm.

 $<sup>^{\</sup>rm 6}$  Observations were conducted December 2014 on a Sunday between 7 am and 8 am.

<sup>&</sup>lt;sup>7</sup> King County Metro Park and Ride utilization report Second Quarter 2014

# **Existing Pedestrian and Bicycle Facilities**

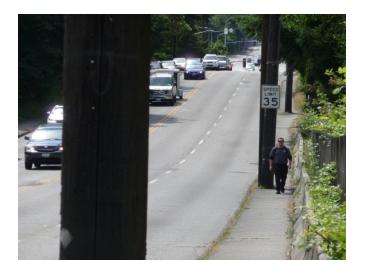
### **Existing Conditions**

Bicycle and pedestrian facilities are located sporadically throughout the study area . **Figure 3.3-6** details the current sidewalk and bicycle infrastructure. Sidewalks exist on both sides of most arterial streets including Meridian Avenue N, 5<sup>th</sup> Avenue NE, 15<sup>th</sup> Avenue NE N/NE 145<sup>th</sup> Street and N/NE 155<sup>th</sup> Street. The quality and condition of these sidewalks varies throughout the subarea. The sidewalks along N/NE 145<sup>th</sup> Street are typically less than five feet wide, provide little buffer from heavy vehicle traffic, are in various states of repair and are constricted by utility poles. The only existing bicycle facilities within the study area are on N/NE 155<sup>th</sup> Street between Meridian Avenue N and 5<sup>th</sup> Avenue NE and on 15<sup>th</sup> Avenue NE between NE 150<sup>th</sup> Street and NE 155<sup>th</sup> Street (these facilities continue beyond the study area boundary). Currently there is not a direct bicycle connection to the proposed station site.

The neighborhoods within the subarea were primarily developed from the 1940s through the 1970s when the area was part of unincorporated King County. The street standards at that time did not require sidewalks, and as such, most of the non-arterial streets today do not have them. This is also true of bicycle lanes which are not provided on non-arterial streets.

When the City of Shoreline incorporated in 1995, it assumed jurisdiction of the study area. The City works with the community to identify and prioritize capital transportation and infrastructure improvements throughout the City through development of the TMP, Transportation Improvement Plan and Capital Improvement Plan.

I-5 presents a barrier for east-west bicycle and pedestrian travel, as there are only crossings within the study area and they are approximately one-half mile apart. Bicycle lanes and sidewalks are present at N 155<sup>th</sup> Street. At the NE 145<sup>th</sup> Street interchange, the existing bridge has narrow, curbside sidewalks and no bicycle facilities. These minimal facilities, combined with heavy traffic volumes, the need for pedestrians to cross freeway on- and offramps and limited north-south crossings, create an uncomfortable environment for pedestrians and bicyclists.



Narrow and non-ADA compliant sidewalk facilities along NE 145th Street near 10th Avenue NE





# Planned Multimodal Transportation Improvements

#### **Pedestrian and Bicycle Improvements**

The 2011 TMP identified a number of improvements to address the pedestrian and bicycle connectivity challenges described in the previous subsection. **Figure 3.3-7** highlights the planned bicycle improvements. **Figure 3.3-8** details the Pedestrian System Plan, as identified in the TMP. Within the study area, the Bicycle System Plan recommends adding bicycle lanes along 5<sup>th</sup> Avenue NE, Meridian Avenue NE and an extension of the current bicycle lanes along NE 155<sup>th</sup> Street to 15<sup>th</sup> Avenue NE. The extension of the bicycle lanes on NE 155<sup>th</sup> Street east of 5<sup>th</sup> Avenue NE as well as bicycle lanes on NE 150<sup>th</sup> Street between 15<sup>th</sup> Avenue NE and 25<sup>th</sup> Avenue NE are part of the Interurban / Burke-Gilman Trail Connectors project that is specified in the 2014-2019 Capital Improvement Program and scheduled for completion in 2015. Bicycle lanes along Meridian Avenue NE and 5<sup>th</sup> Avenue NE are scheduled for completion in 2016.

The Pedestrian System Plan specifies sidewalk facilities for the minor and collector arterials in the study area, including 1<sup>st</sup> Avenue NE, 5<sup>th</sup> Avenue NE, 15<sup>th</sup> Avenue NE, Meridian Avenue NE and NE 155<sup>th</sup> Street. While several of these streets already have sidewalks, many do not comply with the City's existing standards for materials, width and/or amenity zones<sup>8</sup>.

### Vehicle Traffic Improvements

**Figure 3.3-9** highlights projects identified in the TMP as well as in the Lynnwood Link DEIS that are needed to accommodate future planned growth and maintain the City's adopted transportation level of service standard. The TMP calls for the reconfiguration of Meridian Avenue N to allow for a two-way left turn lane from N 145<sup>th</sup> Street to N 205<sup>th</sup> Street. NE 155<sup>th</sup> Street would have a similar treatment, extending the current 3-lane profile from 5<sup>th</sup> Avenue NE to 15<sup>th</sup> Avenue NE. Potential traffic improvements listed in Sound Transit's Lynnwood Link DEIS related to a 145<sup>th</sup> Street station alternative<sup>9</sup> are summarized below. It should be noted that the City of Shoreline has not agreed that these improvements are adequate mitigation for the proposed station.

- 5<sup>th</sup> Avenue NE: Two-way left-turn lane between NE 145<sup>th</sup>
   Street and the park-and-ride entrance along 5<sup>th</sup> Avenue NE
- 5<sup>th</sup> Avenue NE / I-5 northbound on-ramp: Relocate the onramp and intersection to the north of the proposed station parking garage and signalize the intersection
- NE 145<sup>th</sup> Street / 5<sup>th</sup> Avenue NE: Add a protected northbound right-turn phase
- NE 145<sup>th</sup> Street / 12<sup>th</sup> Avenue NE: Add a short refuge area on NE 145<sup>th</sup> Street for eastbound approach

<sup>&</sup>lt;sup>8</sup> Sidewalk improvements along N/NE 145<sup>th</sup> Street were not identified in the TMP as the street right-of-way is not currently within the City of Shoreline.

<sup>&</sup>lt;sup>9</sup> Mitigation measures recommended for a 155<sup>th</sup> Street station alternative are not included in this analysis as they would not be constructed with a 145<sup>th</sup> Street station in place.



Figure 3.3-6 Bicycle System Plan from the Transportation Master Plan

January 2015





Figure 3.3-7 Pedestrian System Plan from the Transportation Master Plan



Figure 3.3-8 Roadway Improvements to Accommodate Growth Identified in the Transportation Master Plan and Sound Transit Lynnwood Link Extension Draft Environmental Impact Statement

\*Note that the City of Shoreline has not agreed that the improvements identified in the ST DEIS are adequate mitigation for the proposed station.



# 3.3.2 Analysis of Potential Impacts

# Introduction

This section describes potential impacts as a result of changes in land use within the study area. It includes a description of the forecast methodology as well as a detailed account of the results of the transportation impact analysis. The three alternatives evaluated during this process included:

- Alternative 1—No Action, which assumes that there would be minimal growth within the subarea based upon existing zoning designations with the total forecast of 4,600 households and 2,325 jobs.
- Alternative 2—Connecting Corridors, which envisions an additional 9,835 households and 9,422 jobs in the subarea above Alternative 1, building out over a 60-100 year horizon.
- Alternative 3—Compact Community, which envisions an additional 10,670 households and 7,314 jobs in the subarea above Alternative 1, building out over a 60-100 year horizon.

# Forecasts

### **Baseline Forecasts**

In order to determine the transportation-related impacts of the various land use alternatives, traffic volumes were forecast based on changes in development intensity within the study area. The 2011 TMP update included forecasts of year 2030 traffic volumes; however these forecasts were based on a transit-oriented land

#### Limited Access Control Standards

WSDOT has full control of access to roadways within 300 feet of a freeway ramp terminal. In the cast of the 145<sup>th</sup> Street Station, this is pertinent for 5<sup>th</sup> Avenue NE and the I-5 Northbound on-ramp. WSDOT policy states that any change to existing land use within this 300 foot boundary would need to be re-evaluated to determine if access can remain if the land use is changed.

Deviations from the policy would require the Federal Highway Administration, WSDOT, Sound Transit and the City of Shoreline to determine an appropriate course of action. This may pose as a constraint to the type of zoning change allowed directly adjacent to the station location.

use scenario in which much of the city's future housing and employment growth was directed to multiple transit nodes within the city, including the 145<sup>th</sup> Street Station subarea.

Because current zoning is geared toward less transit-oriented uses (such as single family and other lower intensity development), the travel model developed for this DEIS was rerun utilizing a "Dispersed" land use scenario, which directed future growth more evenly throughout the city based on existing zoning and observed development patterns. The travel model provided forecast traffic volumes for year 2030 and traffic volumes were then increased by 0.5 percent to reflect estimated 2035 volumes in order to be consistent with the land use horizon year. These revisions to the travel model allow for a true "no action" alternative as a baseline for analyzing the potential impacts of the proposed land use changes in the subarea.

To analyze how the two growth alternatives (Alternatives 2 and 3) would result in different travel patterns due to their mix of land

uses and connectivity, the project team used an innovative trip generation analysis technique known as the mixed-use development (MXD) model. The MXD model is based on a

growing body of research which focuses on the relationship between travel and the built environment. This method supplements conventional trip generation methods to capture effects related to built environment variables (known as the Ds) including **d**ensity, **d**iversity of

The MXD analysis is a method for vehicle trip forecasting that more accurately reflects the number of trips that can be completed within a given subarea due to complementary land uses such as residential and retail.

land uses, destinations (accessibility), development scale, pedestrian and bicycle design, distance to transit services, and demographics. The proposed height and density alternatives in the 145<sup>th</sup> Street Station Subarea incorporate changes in a number of these variables that, in turn, would influence the neighborhood's travel characteristics. In short, places with higher densities, a rich variety of land uses close to one another, and high quality pedestrian, bicycle, and transit environments have lower vehicle trip generation rates. People have more choices in terms of both the travel mode as well as how far they must travel to reach various destinations. The MXD method provides a more reasonable picture of how travel characteristics change over time by avoiding overestimates of the number of vehicle trips that infill projects generate.

The MXD method was applied to the station subarea to calculate the number of walking, biking, transit and automobile trips generated from new development. **Table 3.3-5** highlights the mode split of the PM peak hour trips generated by full development within the subarea. As the table shows, the proposal to increase land use intensity for the Connecting Corridors and Compact Community Alternatives results in a higher proportion of short distance trips that could be made via walking, biking and transit. Due to the more compact nature of the Compact Community Alternative, a higher percentage of trips would be internal, and would remain within the study area as compared to the Connecting Corridors Alternative.

To evaluate how streets and intersections in the study area would operate under each of the alternatives, traffic volume estimates were developed with the following methodology. For the No Action Alternative, traffic volumes were generated from the "Dispersed" land-use model. Because the growth alternatives includes so much more land use than the No Action alternative, the analysis for each of the growth alternatives utilized the No Action traffic volumes plus the additional auto trips related to the land use changes for that alternative. The growth in trips was calculated using the MXD model recognizing a much higher portion of trips would be made by non-auto modes. Note that distribution of trips for all alternatives was based on existing travel patterns and expected shifts as a result of regional traffic growth.

The MXD method was also applied to the alternatives to evaluate transportation-related greenhouse gas (GHG) emissions associated with each. This GHG calculation considers emissions from motor vehicles only and does not include other emissions related to the built environment. While the Connecting Corridors and Compact Community Alternatives result in more GHG emissions than the No Action Alternative, it should be noted that the No Action Alternative assumed substantially less overall housing and employment. On a per unit basis, both growth alternatives have transportation-related GHG emissions. These



estimates are confirmed by outside studies have concluded that on average, denser mixed-use development generates 20 to 60 percent less greenhouse gas emissions per unit when compared to less dense development. To provide a more even comparison amongst the alternatives, a version of the "Dispersed" land-use model was run with housing and employment growth equivalent to the Compact Community Alternative. Under this scenario, the built environment would be similar to the No Action Alternative, which is less conducive to biking, walking, and transit and results in more overall vehicle travel. Similarly, this scenario would generate much higher levels of transportation-related GHGemissions, as shown in **Table 3.3-5**. The forecast mode splits, trips generated and GHG emissions are also identified in **Table 3.3-5**.

Table 3.3-5 Percentage of Trips by Mode and GHG Emissions									
Alternative	External <sup>10</sup> Walk/Bike Trips	External <sup>10</sup> Transit Trips	Internal <sup>10</sup> Trips	External <sup>10</sup> Auto Trips	Total PM Peak Trips Generated	External <sup>10</sup> PM Auto Trips Generated	Daily Transportation- Related GHG Emissions (metric tons)		
Alternative 1 - No Action	4%	5%	15%	76%	6,261	4,756	164		
Alternative 2 - Connecting Corridors	14%	10%	21%	55%	20,700	11,408	240		
Alternative 3 - Compact Community	12%	10%	23%	55%	17,894	9,978	213		
Dispersed Land-Use Model with Alternative 3 Population/Job totals	4%	5%	15%	76%	17,894	13,599	328		

### Roadway Improvement Assumptions

The TMP planned transportation projects and the projects from the Lynnwood Link DEIS outlined in the previous section were considered in all of the future year scenarios. These improvements included:

- Meridian Ave N: Two-way left-turn lane from N 145<sup>th</sup> Street to N 205<sup>th</sup> Street
- NE 155<sup>th</sup> Street: Two-way left-turn lane extended from 5<sup>th</sup> Avenue NE to 15<sup>th</sup> Avenue NE
- 5<sup>th</sup> Avenue NE / I-5 northbound on-ramp: Relocation of the on-ramp and intersection to the north and signalize the intersection
- NE 145<sup>th</sup> Street / 5<sup>th</sup> Avenue NE: Add a protected northbound right-turn phase

<sup>&</sup>lt;sup>10</sup> External trips are assumed to start or end outside of the study area. By contrast, internal trips both start and end within study area.



# Alternative 1—No Action

### Street Access and Circulation

With no change in land use zoning, the current street access and circulation network would remain for Alternative 1—No Action.

# Traffic Impact Analysis

Under Alternative 1—No Action, most signalized intersections would meet the WSDOT, City of Seattle and City of Shoreline LOS standards even with an increase in their average delay. These intersections are shown in **Figure 3.3-10** and **Table 3.3-6**. While some intersections along the 145<sup>th</sup> corridor would operate at LOS E (within WSDOT standards), the intersection at N 145<sup>th</sup> Street and 15<sup>th</sup> Avenue NE would operate at LOS F under this alternative due to added delay for the eastbound approach, the northbound approach and the left turning movement of the westbound approach.

#### Average Daily Traffic Volumes on Major Corridors

As shown in **Table 3.3-7**, average daily traffic volumes and congestion under Alternative 1—No Action are expected to grow along major roadway segments compared to today. **Figure 3.3-11** shows expected traffic volumes on roadways and the projected V/C ratios on principal and minor arterials within the subarea. 5<sup>th</sup> Avenue would operate at a V/C ratio of .96, while N/NE 155<sup>th</sup> Street and Meridian Avenue N would remain within the City's adopted threshold of .90. Note that 15<sup>th</sup> Avenue between 150<sup>th</sup> Street and 155<sup>th</sup> Street has a concurrency threshold of 1.10 as specified in the Transportation Master Plan.

# Vehicle-Miles-Traveled and Greenhouse Gas Emissions

Based on the land use forecasts, the total vehicle-miles-traveled (VMT) generated from existing and future development within the subarea would amount to roughly 227,000 miles per day. This is based on a continuation of existing land-use patterns and current zoning. The suburban nature of development constrains the amount of trips that can be completed via non-auto modes such as walking, bicycling or transit because of the long distances between origins and destinations. In total, future land uses within the subarea would generate roughly 165 metric tons of carbon dioxide ( $CO_2$ ) per day from additional transportation demand. In comparison, a similar amount of housing and retail with a density proposed in the Connecting Corridors Alternative would generate approximately 22,000 fewer daily VMT and 25 fewer metric tons of  $CO_2$  per day.

# Transit Service and Mobility

Under the Alternative 1—No Action, transit service would likely remain at current levels, as the existing land uses and densities would not support increases in transit service frequency. While the future light rail station would provide regional mobility, local bus service would primarily function to transport passengers to and from outside of the station subarea. The increased traffic along N/NE 145<sup>th</sup> Street may have an impact on overall transit reliability without any mitigating measures, such as transit signal priority, queue jumps or other intersection treatments.

# **Parking Conditions**

Based on current supply and the expected limited growth in demand in the study area, parking conditions would remain similar to existing conditions. Peak parking demand generated by



land uses in the study area is forecast to be approximately 5,400 spaces. The parking minimums articulated in City code specify that any new development of single-family residential uses would be built with two spaces per unit. Any new development in retail or other commercial-related land use would require one space per 300 to 400 feet of leasable space and would be accommodated on-site. With little opportunity for development of complimentary uses, the amount of parking that could be shared would be limited. The current zoning code allows for a reduction of up to 25 percent required spaces if there is a shared parking agreement with adjoining parcels or if high-capacity transit service is available within a one-half-mile walk shed.

### Pedestrian and Bicycle Mobility

Under the Alternative 1—No Action, the pedestrian and bicycle environment would improve with the planned improvements specified in the TMP. However, the dispersed land use would limit the amount of trips that could be completed via bicycling or walking.

Bicyclists could utilize N/NE 155<sup>th</sup> Street and 5<sup>th</sup> Avenue NE in order to connect to the station from the east and west. However, an east-west gap would still exist on 145th across I-5 due to the lack of facilities along 145<sup>th</sup> Street and the barrier created by I-5.



	Table 3.3-6 PM Peak Period Intersection Level of Service for Alternative 1—No Action									
Signal Type	Intersection	Existing LOS	Existing Delay (sec. / veh.)	No Action LOS	No Action Delay (sec. / veh.)					
Signalized	145th St / Meridian Ave	В	16	D	55					
Signalized	145th St / 1st Ave	В	18	E	57					
Signalized	145th St / SB I-5	D	46	E	66					
Signalized	145th St / 5 <sup>th</sup> Ave	D	42	F	81					
Signalized	5th Ave / I-5 NB On-ramp	А	<10	А	<10					
Signalized	145th St / 15th Ave	E	60	F	94					
Signalized	150th St / 15th Ave	В	16	С	21					
Signalized	155th St / 15th Ave	С	30	D	37					
Signalized	155th St / 5th Ave	В	10	В	17					
Unsignalized	155th St / 1st Ave	С	21	E	49					
Signalized	155th / Meridian Ave	В	14	С	27					



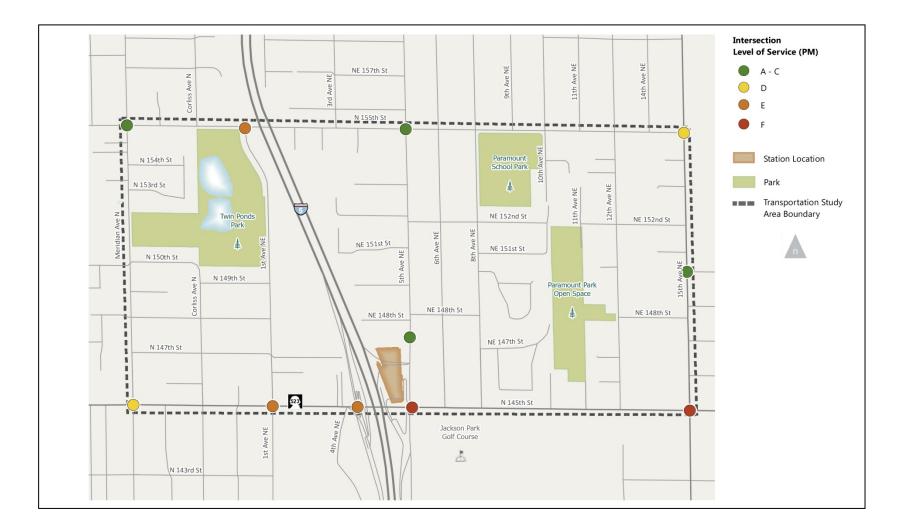


Figure 3.3-9 Intersection Level of Service (Alternative 1—No Action)



	Table 3.3-7 Average Daily Traffic Volumes and PM Peak Period Congestion for Alternative 1—No Action							
Street	Segment	Existing ADT	No Action ADT	Existing PM Peak Hour Volume <sup>10</sup>	No Action PM Peak Hour Volume <sup>11</sup>	No Action V/C Ratio		
East-West Corridors								
N/NE 145th Street	West of I-5	25,240	30,430	1,331	1,650	1.00		
NE 145th Street	East of I-5	31,790	37,650	1,431	1,630	0.99		
N 155th Street	West of I-5	11,640	14,920	538	700	0.73		
NE 155th Street	East of I-5	9,900	12,380	486	610	0.64		
North-South Corridors								
5th Avenue NE*	I-5 NB on-ramp to 155th Street	7,170	9,230	530	670	0.96		
15th Avenue NE	145th to 150th Street	16,130	20,060	1,038	1,290	0.65		
15th Avenue NE**	150th to 155th Street	14,240	18,640	881	1,150	0.96		
Meridian Avenue N	145th to 155th Street	6,220	9,310	392	650	0.78		

\*The portion of 5<sup>th</sup> Avenue NE between NE 145<sup>th</sup> Street and the I-5 northbound on-ramp is exempt from the City of Shoreline's concurrency standard due to the need to make modifications to an intersection that is currently outside of the City's jurisdiction

\*\* The City allows a V/C ratio of 1.10 for 15<sup>th</sup> Avenue NE, between NE 150<sup>th</sup> Street and NE 175<sup>th</sup> Street due to rechannelization for operational safety



<sup>&</sup>lt;sup>11</sup> One-directional volume only, signifying the direction with the highest volume



Figure 3.3-10 Average Daily Traffic and PM Peak Congestion (Alternative 1—No Action)



# Alternative 2 – Connecting Corridors

### Street Access and Circulation

Changes in land use zoning, parcel consolidation and redevelopment would allow for the creation of new streets and paths along with the consolidation of access points along 5<sup>th</sup> Avenue NE, N/NE 155<sup>th</sup> Street and N/NE 145<sup>th</sup> Street. Transportation options would still be constrained by I-5, with east-west connections limited to N/NE 145<sup>th</sup> Street and N/NE 155<sup>th</sup> Street.

# **Traffic Volumes**

Under Alternative 2—Connecting Corridors, with full build-out of the proposed zoning, most intersections would fail to meet City and WSDOT standards for LOS, operating at LOS E or F as shown in **Figure 3.3-12** and **Table 3.3-8**. Intersections along N/NE 145<sup>th</sup> and N/NE 155<sup>th</sup> Street would experience a large increase in average vehicle delay due to additional vehicle trips generated by development proposed under Alternative 2—Connecting

Corridors. Provision of internal circulation routes including consolidated access points, would potentially lessen intersection and roadway impacts. The improvements needed to mitigate these impacts are described later in this document.

Collector Arterials and local secondary streets (such as 1<sup>st</sup> Avenue NE, 10<sup>th</sup> Avenue NE and 8<sup>th</sup> Avenue NE) were not explicitly analyzed since they are not subject to the City's concurrency standard for V/C ratios. As future travel patterns change, some of these streets may be candidates for potential traffic calming measures or for reclassification.

#### Average Daily Traffic Volumes on Major Corridors

Similarly, the increase in trips generated within the study area would result in substantial growth in ADT volumes along roadway corridors as shown in **Table 3.3-9** and **Figure 3.3-13**. N/NE 145<sup>th</sup> Street, N/NE 155<sup>th</sup> Street, Meridian Avenue N, 5<sup>th</sup> Avenue NE and 15<sup>th</sup> Avenue NE would all experience a large increase, with growth between 40 and 150 percent as compared to the No Action Alternative. V/C ratios for all of the major corridors would exceed .90 during the PM peak period.

# Vehicle-Miles-Traveled and Greenhouse Gas Emissions

Based on the forecasts, the total VMT generated from land uses within the subarea under Alternative 2—Connecting Corridors would amount to roughly 626,000 miles per day. In total, future land use would generate roughly 240 metric tons of CO<sub>2</sub> per day. By comparison, an equivalent amount of housing and retail with a density similar to Alternative 1—No Action would generate approximately 740,000 daily VMT and 330 metric tons of CO<sub>2</sub> per day.

# Transit Service and Mobility

The higher density provided under Alternative 2—Connecting Corridors would support more robust public transit service within the study area. The TMP recommends that frequency of service could be improved to enable more frequent connections to the proposed light rail station, including service on existing routes and newly directed feeder service to the station. The substantial growth in vehicle traffic would impact overall transit speed and reliability along N/NE 145<sup>th</sup> Street, N/NE 155<sup>th</sup> Street, Meridian Avenue N, 5<sup>th</sup> Avenue NE and 15<sup>th</sup> Avenue NE if no mitigation measures are implemented.





### **Parking Conditions**

For Alternative 2—Connecting Corridors, peak parking demand generated by new development is expected to be approximately 29,200 spaces more than Alternative 1—No Action (a total of 34,600) in the subarea with a higher concentration near retailuses. This amount is a 17 percent reduction from unadjusted demand due to the potential for shared parking among complementary uses. The current zoning code allows for a reduction of up to 25 percent required spaces if there is a shared parking agreement with adjoining parcels or if high-capacity transit service is available within a one-half-mile walk shed, conditions that future development would meet under Alternative 2—Connecting Corridors.

### Pedestrian and Bicycle Mobility

Pedestrian and bicycle mobility should improve as new sidewalk and bicycle facilities are installed with new development. City code stipulates that any multifamily residential uses must have a minimum of one short-term bicycle parking space per 10 dwelling units and one long-term bicycle parking space per studio or 1bedroom unit and two per unit having two or more bedrooms. Commercial development must have one short-term bicycle stall per 12 vehicle parking spaces and one long-term space per 25,000 square feet of commercial floor area. Additionally, conditions for development could be structured to allow for the creation of non-motorized paths within larger parcels to connect with other on- and off-street pedestrian and bicycle facilities. The increase in density surrounding the light rail station would lend itself to more bike and walk trips within the area due to compatible land uses such as residential and retail. Additionally, the substantial increase in vehicle traffic along N/NE 145<sup>th</sup> Street, N/NE 155<sup>th</sup> Street, Meridian Avenue N, 5<sup>th</sup> Avenue NE and 15<sup>th</sup> Avenue NE

over time will impact bicycle stress along these streets. This may require more separated facilities, such as off-street trails or cycle tracks to make cycling a more comfortable experience for most riders.

	Table 3.3-8 PM Peak Period Intersection Level of Service										
	for Alternative 2—Connecting Corridors										
Signal Type	Intersection	Existing LOS	Existing Delay (sec. / veh.)	No Action LOS	No Action Delay (sec. / veh.)	Connecting Corridors LOS	Connecting Corridors Delay (sec. / veh.)				
Signalized	145th St / Meridian Ave	В	16	D	55	F	730				
Signalized	145th St / 1st Ave	В	18	E	57	F	920				
Signalized	145th St / SB I-5	D	46	E	66	F	240				
Signalized	145th St / 5 <sup>th</sup> Ave	D	42	F	81	F	390				
Signalized	5th Ave / I-5 NB On-ramp	А	<10	А	<10	D	52				
Signalized	145th St / 15th Ave	E	60	F	94	F	290				
Signalized	150th St / 15th Ave	В	16	С	21	E	59				
Signalized	155th St / 15th Ave	С	30	D	37	F	460				
Signalized	155th St / 5th Ave	В	10	В	17	F	670				
Unsignalized	155th St / 1st Ave	С	21	E	49	F	>1000				
Signalized	155th / Meridian	В	14	С	27	F	410				

Note: Large delay values (over 240 seconds) rounded to the nearest ten



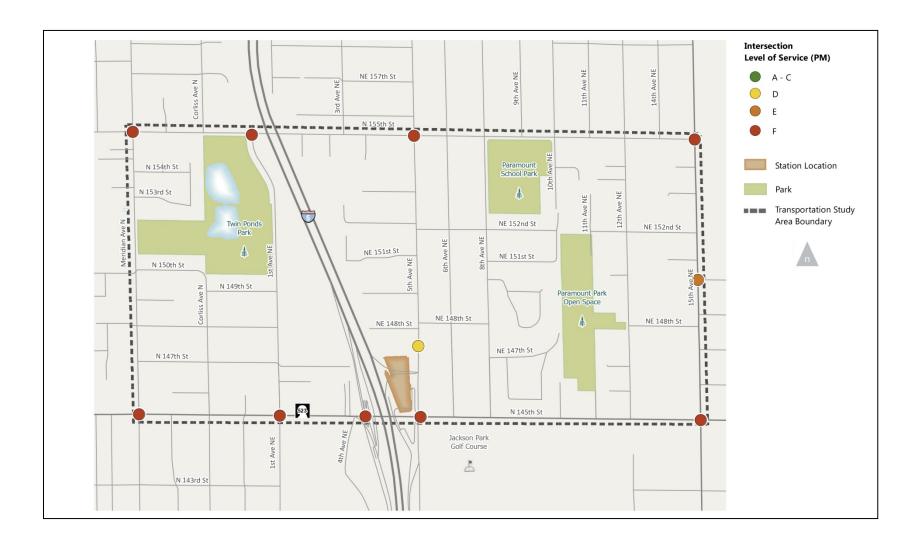


Figure 3.3-11 Intersection Level of Service (Alternative 2—Connecting Corridors)



	Table 3.3-9 Avera	ge Daily Traf	fic Volumes a	nd PM Peak Pe	riod Congestion			
for Alternative 2—Connecting Corridors								
Street	Segment	Existing ADT	No Action ADT	Connecting Corridors ADT	No Action PM Peak Hour Volume <sup>11</sup>	Connecting Corridors PM Peak Hour Volume <sup>12</sup>	Connecting Corridors V/C Ratio	
East-West Corridors								
N/NE 145th Street	West of I-5	25,240	30,430	55,340	1,650	2,900	1.75	
NE 145th Street	East of I-5	31,790	37,650	60,810	1,630	2,600	1.57	
N 155th Street	West of I-5	11,640	14,920	36,470	700	1,780	1.87	
NE 155th Street	East of I-5	9,900	12,380	25,100	610	1,210	1.27	
North-South Corridors								
5th Avenue NE*	I-5 NB on-ramp to 155th Street	7,170	9,230	22,620	670	1,270	1.81	
15th Avenue NE	145th to 150th Street	16,130	20,060	31,950	1,290	1,890	0.94	
15th Avenue NE**	150th to 155th Street	14,240	18,640	25,770	1,150	1,510	1.26	
Meridian Avenue N	145th to 155th Street	6,220	9,310	23,450	650	1,380	1.64	

\*The portion of 5<sup>th</sup> Avenue NE between NE 145<sup>th</sup> Street and the I-5 northbound on-ramp is exempt from the City of Shoreline's concurrency standard due to the need to make modifications to an intersection that is currently outside of the City's jurisdiction

\*\* The City allows a V/C ratio of 1.10 for 15<sup>th</sup> Avenue NE, between NE 150<sup>th</sup> Street and NE 175<sup>th</sup> Street due to rechannelization for operational safety



<sup>&</sup>lt;sup>12</sup> One-directional volume only, signifying the direction with the highest volume



### Figure 3.3-12 Average Daily Traffic and PM Peak Congestion for Alternative 2—Connecting Corridors



# Alternative 3—Compact Community

### Street Access and Circulation

Similar to Alternative 2—Connecting Corridors, changes in land use zoning, parcel consolidation and redevelopment would allow for the creation of new streets and paths along with the consolidation of access points along 5<sup>th</sup> Avenue NE, N/NE 155<sup>th</sup> Street and N/NE 145<sup>th</sup> Street. The area would still be constrained by I-5, with east-west connections limited to N/NE 145<sup>th</sup> Street and N/NE 155<sup>th</sup> Street.

### **Traffic Volumes**

Under Alternative 3—Compact Community, with full build-out of the proposed zoning, most intersections would fail to meet City and WSDOT standards for LOS, operating at LOS E or F as shown in **Figure 3.3-14** and **Table 3.3-10**. Intersections along N/NE 145<sup>th</sup> and N/NE 155<sup>th</sup> Street would experience a large increase in average vehicle delay due to additional vehicle trips generated by development proposed under Alternative 3—Compact

Community. Provision of internal circulation routes, which consolidate access, would potentially lessen intersection and roadway impacts. The improvements needed to mitigate these impacts are described later in this document.

Collector Arterials and local secondary streets (such as 1<sup>st</sup> Avenue NE, 8<sup>th</sup> Avenue NE and 10<sup>th</sup> Avenue NE) were not explicitly analyzed since they are not subject to the City's concurrency standard for V/C ratios. As future travel patterns change, some of these streets may be candidates for potential traffic calming measures or for reclassification.

#### Average Daily Traffic Volumes on Major Corridors

Similarly, the increase in trips generated within the study area would result in substantial growth in ADT volumes along roadway corridors as shown in **Table 3.3-11** and **Figure 3.3-15**. N/NE 145<sup>th</sup> Street, N/NE 155<sup>th</sup> Street, Meridian Avenue N, 5<sup>th</sup> Avenue NE and 15<sup>th</sup> Avenue NE would all experience a large increase, with growth between 40 and 140 percent as compared to the No Action Alternative. V/C ratios for all of the major corridors would exceed .90 during the PM peak period.

# Vehicle-Miles-Traveled and Greenhouse Gas Emissions

Based on the land use forecasts, the total VMT generated from land uses within the subarea under Alternative 3—Compact Community would amount to roughly 542,000 miles per day. In total, future land use and transportation would generate roughly 213 metric tons of  $CO_2$  per day under Alternative 3—Compact Community. In comparison, a similar amount of housing and retail with a density similar to Alternative 1—No Action would generate approximately 725,000 daily VMT and 328 metric tons of  $CO_2$  per day based on existing land use patterns and the anticipated amount of driving.

# Transit Service and Mobility

The higher density provided under Alternative 3— Compact Community would support more robust public transit service within the study area. The TMP recommends that frequency of service could be improved to enable more frequent connections to the proposed light rail station, including service on existing routes and newly directed feeder service to the station The substantial growth in vehicle traffic would impact overall transit speed and reliability along N/NE 145<sup>th</sup> Street, N/NE 155<sup>th</sup> Street,





Meridian Avenue N, 5<sup>th</sup> Avenue NE and 15<sup>th</sup> Avenue NE if no mitigation measures are provided.

### **Parking Conditions**

Within the subarea, peak parking demand generated by new development is expected to be approximately 28,100 spaces more than Alternative 1—No Action (a total of 33,500), with a higher concentration near retail-uses. This amount is a 17 percent reduction from unadjusted demand due to the potential for shared parking between complementary uses. The current zoning code allows for a reduction of up to 25 percent required spaces if there is a shared parking agreement with adjoining parcels or if high-capacity transit service is available within a one-half-mile walk shed, conditions that future development would meet under Alternative 3—Compact Community.

### Pedestrian and Bicycle Mobility

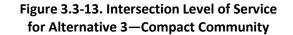
Pedestrian and bicycle mobility should improve as new sidewalk and bicycle facilities are installed with new development. Consolidation of parcels may allow for nonmotorized paths to close current gaps in the roadway network. Alternative 3— Compact Community is more conducive to walk and bike trips compared to Alternative 2—Connecting Corridors due to a higher density of land use in a smaller area. However, a substantial increase in traffic volumes in the subarea may increase overall bicycle stress for a number of roadway segments including along N/NE 145<sup>th</sup> Street, N/NE 155<sup>th</sup> Street, Meridian Avenue NE, 5<sup>th</sup> Avenue NE and 15<sup>th</sup> Avenue NE. This may require more separated facilities, such as off-street trails or cycle tracks to make cycling a more comfortable experience for most riders.



	Table 3.3-10 PM Peak Period Intersection Level of Service							
Signal Type	Intersection	for Alternative Existing LOS	3—Compact Co Existing Delay (sec. / veh.)	No Action LOS	No Action Delay (sec. / veh.)	Compact Community LOS	Compact Community Delay	
Signalized	145th St / Meridian Ave	В	16	D	55	F	(sec. / veh.) 660	
Signalized	145th St / 1st Ave	В	18	E	57	F	820	
Signalized	145th St / SB I-5	D	46	E	66	F	250	
Signalized	145th St / 5 <sup>th</sup> Ave	D	42	F	81	F	390	
Signalized	5th Ave / I-5 NB On-ramp	А	<10	А	<10	D	38	
Signalized	145th St / 15th Ave	E	60	F	94	F	330	
Signalized	150th St / 15th Ave	В	16	С	21	E	70	
Signalized	155th St / 15th Ave	С	30	D	37	F	226	
Signalized	155th St / 5th Ave	В	10	В	17	F	420	
Unsignalized	155th St / 1st Ave	С	21	E	49	F	>1000	
Signalized	155th / Meridian	В	14	С	27	F	390	

Note: Large delay values (over 240 seconds) rounded to the nearest ten







Street	Segment	Existing ADT	No Action ADT	Compact Community ADT	No Action PM Peak Hour Volume <sup>12</sup>	Compact Community PM Peak Hour Volume <sup>13</sup>	Compact Community V/C Ratio
East-West Corridors							
N/NE 145th Street	West of I-5	25,240	30,430	54,940	1,650	2,900	1.76
NE 145th Street	East of I-5	31,790	37,650	64,060	1,630	2,720	1.65
N 155th Street	West of I-5	11,640	14,920	34,550	700	1,650	1.74
NE 155th Street	East of I-5	9,900	12,380	22,770	610	1,140	1.20
North-South Corridors							
5th Avenue NE*	I-5 NB on-ramp to 155th Street	7,170	9,230	21,980	670	1,210	1.73
15th Avenue NE	145th to 150th Street	16,130	20,060	33,670	1,290	1,970	0.98
15th Avenue NE**	150th to 155th Street	14,240	18,640	26,220	1,150	1,530	1.27
Meridian Avenue N	145th to 155th Street	6,220	9,310	22,020	650	1,250	1.49

Table 3.3-11 Average Daily Traffic Volumes and PM Peak Period Congestion for Alternative 3—Compact Community

\*The portion of 5<sup>th</sup> Avenue NE between NE 145<sup>th</sup> Street and the I-5 northbound on-ramp is exempt from the City of Shoreline's concurrency standard due to the need to make modifications to an intersection that is currently outside of the City's jurisdiction

\*\* The City allows a V/C ratio of 1.10 for 15<sup>th</sup> Avenue NE, between NE 150<sup>th</sup> Street and NE 175<sup>th</sup> Street due to rechannelization for operational safety



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<sup>&</sup>lt;sup>13</sup> One-directional volume only, signifying the direction with the highest volume

#### Figure 3.3-14. Average Daily Traffic and PM Peak Congestion Alternative 3—Compact Community





## **3.3.3 Mitigation Measures** Introduction

This section describes the mitigation measures that would be needed to address impacts under each of the future year alternatives. It is important to note that the land use changes proposed and the traffic impacts identified in the previous section are based upon development scenarios that are anticipated to be very long term, particularly for Alternatives 2 and 3. Despite this long-term road to implementation, the mitigation measures proposed below identify the full scale of actions needed. In reality, these measures would gradually be incorporated as development occurs and would be continually monitored to address the most current conditions.

## **Applicable Regulations and Commitments**

The Shoreline Municipal Code (SMC) contains a number of regulations and stipulations that would apply to all future alternatives. Under Chapter 14.10, the City of Shoreline currently manages a Commute Trip Reduction program that assists employers of a certain size to reduce their overall VMT and automobile trips. This program should continue with new employers in the area to leverage the availability of high capacity transit and reduce the net increase in automobile trips. Additionally, Chapter 20.50 in the Shoreline Municipal Code contains a number of stipulations for new development that aim to improve pedestrian and bicycle facilities while also reducing the amount of parking provided.

#### **WSDOT Limited Access Control Standards**

WSDOT has full control of access to roadways within 300 feet of a ramp terminal. In the cast of the 145<sup>th</sup> Street Station subarea

plan, this is relevant for 5<sup>th</sup> Avenue NE and the I-5 Northbound on-ramp. WSDOT policy states that any change to existing land use within this 300 foot boundary would need to be re-evaluated to determine if access can remain if their land use changed. Deviations from that policy would require the Federal Highway Administration, WSDOT, Sound Transit and the City of Shoreline to determine a course of action.

## 145<sup>th</sup> Street Corridor Study

N/NE 145<sup>th</sup> Street will be a major conveyor for all modes to get to and from the proposed light rail station. Currently this corridor is not within the City of Shoreline, however, discussions are underway to annex the right-of-way. The City of Shoreline is conducting a study for the 145<sup>th</sup> Street corridor. The study will include development of a master plan for the proposed improvements to the corridor. Through the process, the City will evaluate several options for accommodating multiple travel modes, including vehicles, buses, pedestrians, bicyclists, and freight. As part of the process, the City will solicit input from partner agencies, adjacent jurisdictions, residents, property owners, business owners, community groups, and human service organizations. The corridor study is a key element that will conclude after the 145<sup>th</sup> Street Station Subarea planning efforts are completed and any mitigation required for N/NE 145<sup>th</sup> Street will be addressed within it.

## Mitigation Measures for Street and Intersection Impacts

With full build-out, the level of development planned in Alternative 2—Connecting Corridors and Alternative 3—Compact Community would be extensive and would require substantial multimodal transportation investments to mitigate the impacts.



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Additional mitigation measures may also be needed for Alternative 1—No Action to maintain the WSDOT's current LOS standards in 2035.

It is estimated that both Alternative 2—Connecting Corridors and Alternative 3—Compact Community would take 60 years or more to build out to the proposed zoning capacity. A later section of the DEIS provides a near-term 20-year growth scenario to compare conditions forecast for 2035. Additionally, through the EIS process, a Preferred Alternative will be identified for the Final EIS, with analysis provided for full build-out of the alternative and a 20-year growth scenario.

Multimodal transportation improvements required to support the growth of either of these alternatives could be funded incrementally through a variety of sources, including federal and state grants and cycles of capital improvement plans and as mitigation associated with new development. The length of time to build-out would enable the City to monitor growth and proactively plan for needed improvements over time.

The City also intends to pursue a variety of transportation demand management strategies to mitigate and minimize traffic congestion and reduce vehicle miles traveled, consistent with the Climate Action Plan and other City plans and policies. Measures can be taken to reduce the impact of additional vehicle traffic generated from an increase in density. For example, new development sites along the 5<sup>th</sup> Avenue NE and 155<sup>th</sup> Street corridors likely would be required to have access from the side streets and/or rear alleyways. This would reduce the amount of traffic that directly impacts theses corridors.

Access management strategies (reduced curb cuts/driveways), as well as a new system of well-connected blocks, road connections,

non-motorized facilities and alleyways would serve corridor development, taking pressure off N/NE 155<sup>th</sup> Street and 5<sup>th</sup> Avenue NE. This would improve overall travel flow for all modes and enhance pedestrian and bicyclist safety.

Many of the projects identified as mitigation for the alternatives would require roadway widening near the intersection locations, and additional easements or right-of-way would need to be obtained. Again, the full build-out of the growth alternatives is not expected for 60 or more years.

As a means to reduce the amount of infrastructure necessary to accommodate future growth, the City may look to revise its concurrency standards.

In addition to the roadway improvements called out in the TMP<sup>14</sup> and the Sound Transit Lynnwood Link Extension DEIS, the following potential measures are highlighted to mitigate street and intersection impacts under the full build-out of each alternative assuming the City of Shoreline maintains the current intersection and roadway LOS standards.

#### Alternative 1-No Action

- Implement recommendations from the 145<sup>th</sup> Street Corridor Study
- Provide a right-turn pocket for the northbound approach at 155<sup>th</sup> Street and 1<sup>st</sup> Avenue NE.
- Extend the two-way left turn lane profile along 5<sup>th</sup>
   Avenue NE from the I-5 NB on-ramp to NE 155<sup>th</sup> Street



<sup>&</sup>lt;sup>14</sup> For example, where the TMP recommends a center-turn lane along Meridian Avenue, that profile is assumed in addition to the recommended improvements stated in this section.

#### Alternative 2—Connecting Corridors and Alternative 3 – Compact Community

- Implement recommendations from the 145<sup>th</sup> Street Corridor Study
- Transportation demand management strategies and actions to minimize traffic congestion on N/NE 155<sup>th</sup> Street, Meridian Avenue N, 5<sup>th</sup> Avenue NE and other key corridors in the subarea
- Additional through-lanes in the eastbound and westbound direction along N/NE 155<sup>th</sup> Street to create a 5-lane profile from Aurora Avenue N to 15<sup>th</sup> Avenue NE
- Intersection improvements at N 155<sup>th</sup> Street and Meridian Avenue N including channelized right-turn lane for eastbound and westbound approaches and dual leftturn lanes for northbound and southbound approaches
- Right-turn lane for northbound approach to N 155<sup>th</sup> Street and 1<sup>st</sup> Avenue N
- Additional through-lanes in the northbound and southbound direction along 5<sup>th</sup> Avenue NE to create a 5lane profile between 145<sup>th</sup> Street and 155<sup>th</sup> Street
- Dual left-turn lanes for eastbound approach at NE 155<sup>th</sup> Street and 5<sup>th</sup> Avenue NE
- Intersection improvements at NE 155<sup>th</sup> Street and 15<sup>th</sup> Avenue NE including a channelized right-turn lane for

southbound approach E and dual left-turn lanes for the eastbound approach<sup>15</sup>

- Channelized right-turn lane for northbound approach at NE 150<sup>th</sup> Street and 15<sup>th</sup> Avenue NE
- Channelized right-turn lane for northbound approach at NE 150<sup>th</sup> Street and 15<sup>th</sup> Avenue NE

In addition to the projects which were based on the City's LOS standards, the City should engage as needed in traffic calming measures along non-arterial streets . The City of Shoreline has a Neighborhood Traffic Safety Program to help address the safety concerns on non-arterial streets stemming from higher speed and/or cut-through traffic. This program includes enhanced enforcement and education along with engineering solutions such as traffic circles, speed humps and narrowed lanes. Solutions to address traffic issues are discussed and implemented as part of a public process to ensure they appropriately address a given circumstance.

## **Transit Service Mitigation Measures**

In the Lynnwood Link Extension DEIS, Sound transit assumed at least 24 buses will serve the future light rail station during the PM peak hour. Depending on final design of the station, ample bus facilities will be needed. The design of these facilities will need to consider impacts to both traffic and transit.

<sup>&</sup>lt;sup>15</sup> Note that the southbound approach right-turn channelization is not needed for Alternative 3 – Compact Community



The City of Shoreline should continue coordinating with area transit agencies in the development of a transit service integration plan for the light rail station subarea. This coordination should coincide with traffic analysis to ensure transit service speed and reliability along the major corridors in the area. Transit reliability can be improved via a number of transit priority treatments including signal priority, bus bulbs and bus queue jump lanes. These measures should be evaluated as part of the transit service integration plan. Additionally, on-demand transport such as the King County Metro Access and the Hyde Shuttles should have direct service to the light rail station bus access point in order to improve service for those with mobility limitations.

Additional modes that could operate in coordination with transit include bike sharing or car sharing programs such as Zipcar, Car2Go or Puget Sound Bike Share ("Pronto"). An analysis of potential demand for these services will be needed to determine their relative feasibility.

## **Parking Mitigation Measures**

While any new development is required by City code to provide ample off-street parking for the demand generated by its respective use, there are options to reduce the overall amount of parking supply created. City code stipulates that development may reduce its parking supply requirement by up to 25 percent by using a combination of the following criteria:

- Shared parking agreement with adjoining parcels and land uses that do not have conflicting parking demands
- High-occupancy vehicle (HOV) and hybrid or electric vehicle (EV) parking

- Conduit for future electric vehicle charging spaces, per National Electrical Code, equivalent to the number of required disabled parking spaces
- High-capacity transit service available within a one-half mile walk shed
- Concurrence with King County Right Size Parking data, census tract data, and other parking demand study results

While the two growth alternatives have more development and higher trip generation than the No Action, they also provide greater opportunity to take advantage of these code provisions. Alternative 1—No Action by contrast lends itself to more autooriented development that is not as conducive to measures like shared parking. Besides mitigating parking demand generated from new development, any on-street parking spillover generated from the proposed land uses or the light rail station may be mitigated via a Residential Parking Zone (RPZ) designation. An RPZ provides on-street parking permits to residents located within the zone to help discourage long-term parking by nonresidents on non-arterial streets. An evaluation of parking demand in the area as it redevelops following implementation of light rail service should be conducted regularly to assess the need of an RPZ designation. Additional measures that may be taken to address parking impacts include:

 Install signage and driver information to direct commercial and light rail users towards available offstreet parking garage locations near commercial development



 Implement variable parking time limits and paid parking with variable prices to moderate parking demand and ensure sufficient supply during peak parking periods

## **Pedestrian and Bicycle Facilities Mitigation**

#### Measures

Additional traffic along all of the principal and minor arterials along with increased bus service will create a higher potential for conflicts between bicyclists, pedestrians, transit vehicles and automobiles. Besides recommendations along 145<sup>th</sup> Street from the Route Development Plan, separated bicycle facilities along key corridors such as N/NE 155<sup>th</sup> and 5<sup>th</sup> Avenue NE may be necessary to reduce the number of conflicts. N/NE 155<sup>th</sup> Street is a part of the Interurban – Burke-Gilman trail connection and it would serve as a primary gateway for trail users to access the station. The "greenway" shown on the Alternatives map provides an east-west bicycle route along non-residential streets. The growth alternatives could improve overall pedestrian and bicycle connectivity by allowing for more dedicated pathways with parcel consolidation and expanded development. Any new development in the area under the proposed zoning should consider pedestrian and bicycle paths through the sites to allow for connections to the station and subarea amenities without the need to travel along busy arterials. All streets in the subarea, whether arterial or not should include sidewalks, and sidewalks will need to be included with all redevelopment activity.

The major barrier of I-5 restricting non-motorized connections requires improved bicycle and pedestrian access. The 145<sup>th</sup> Street Corridor Study will examine alternatives to improve the bicycle and pedestrian crossing of I-5 near the light rail station. Additionally, the large number of parks in the study area creates an opportunity to provide dedicated pathways between the parks and the light rail station. The City is interested in exploring opportunities for bicycle sharing and bicycle storage facilities near the station to encourage and enhance bike access to transit.

#### The Green Network

A concept proposed under either of the two action alternative calls for creation of a green network of sidewalks, trails, bicycle lanes, parks, stream corridors, wetlands, and natural areas throughout the subarea, implemented over time with redevelopment. Green infrastructure and low impact development stormwater management and water quality treatment facilities also would be a part of this network. For an enlarged illustration of the green network concept and more discussion, refer to Sections 3.1 and 3.5 of this DEIS.



The Green Network Concept—interconnecting trails, pedestrian, and bicycle facilities in green streets and parks throughout the subarea. This concept would greatly enhance pedestrian and bicycle access to and from the light rail station and within the subarea.





## **3.3.4 Phased Improvements**

## Introduction

While the impacts and mitigation measures specified for Alternative 2 – Connecting Corridors and Alternative 3 – Compact Communities would occur over the projected 60 to 100 year timespan, this section describes the mitigation measures that would be needed to address impacts in the near-term, specifically over a 20-year horizon.

#### **Growth Forecast**

The land use patterns of Alternative 2 – Connecting Corridors were used to generate the near-term growth estimates. This land use pattern is more dispersed throughout the study area as compared to Alternative 3 – Compact Community and represents a more conservative estimate of impacts to the transportation network. Based on a 2.5 percent growth rate over the next 20 years, a total of 2,678 jobs and 5,681 households would be located within the study area. The assumed growth rate is based on historical trends in the region and may fluctuate between 1.5 and 2.5 percent depending on actual market conditions. Additionally, while the analysis assumed an equal distribution of development throughout the study area, particular parcels may redevelop at a higher or lower rate than the average. Actual distribution of development would impact where and when specific roadways and areas would experience a change in travel patterns.

# Average Daily Traffic and Intersection Level of Service

As shown in **Figure 3.3-16** and in **Figure 3.3-17**, additional trips resulting from redevelopment as part of the 20-year growth scenario for Alternative 2 would increase average vehicle delay at intersections and along roadways, particularly along N/NE 145<sup>th</sup> Street. However, many intersections would still operate at or better than LOS D during the P.M. peak period. **Table 3.3-12** and **Table 3.3-13** highlight the traffic volume and LOS values forecast for the 2035 time horizon.

Congestion along N/NE 145<sup>th</sup> Street and other streets would be influenced by actual development patterns and how this new development is accessed. While impacts from light rail implementation are addressed in the Lynnwood Link Extension DEIS, the following section identifies specific steps the city may take to address any potential impacts related to land use development within the study area over the next 20 years.



	Table 3.3-12 PM Peak Period Intersection Level of Service							
for the 2035 Build-out of Alternative 2—Connecting Corridors								
Signal Type	Intersection	Existing LOS	Existing	No Action	No Action	2035 Build-	2035 Build-	
			Delay (sec. / veh.)	LOS	Delay (sec. / veh.)	out LOS	out Delay (sec. / veh.)	
Signalized	145th St / Meridian Ave	В	16	D	55	F	180	
Signalized	145th St / 1st Ave	В	18	E	57	F	117	
Signalized	145th St / SB I-5	D	46	E	66	E	79	
Signalized	145th St / 5 <sup>th</sup> Ave	D	42	F	81	F	129	
Signalized	5th Ave / I-5 NB On-ramp	А	<10	А	<10	А	<10	
Signalized	145th St / 15th Ave	E	60	F	94	F	118	
Signalized	150th St / 15th Ave	В	16	С	21	С	22	
Signalized	155th St / 15th Ave	С	30	D	37	D	52	
Signalized	155th St / 5th Ave	В	10	В	17	С	27	
Unsignalized	155th St / 1st Ave	С	21	E	49	F	129	
Signalized	155th / Meridian	В	14	С	27	D	53	



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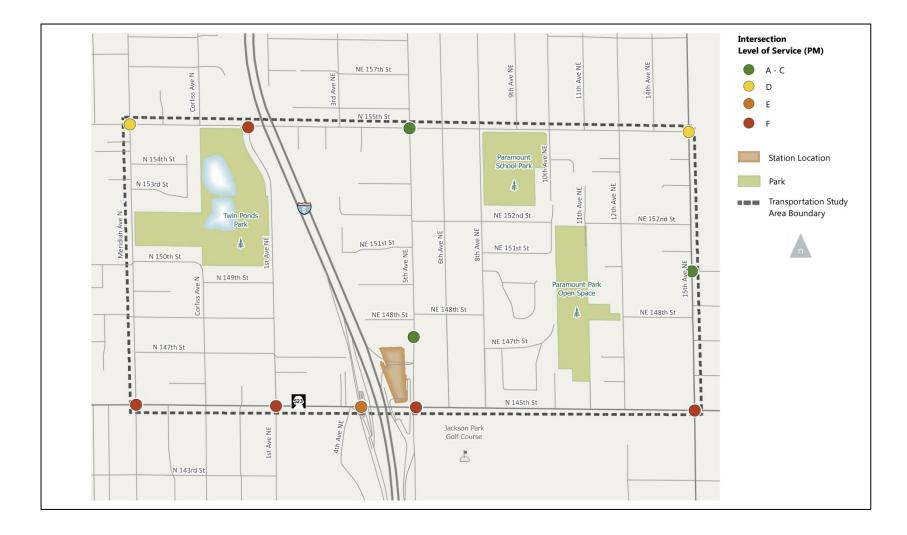


Figure 3.3-15. Intersection Level of Service for the 2035 Build-out of Alternative 2 – Connecting Corridors



2035 Build-out of Alternative 2—Connecting Corridors							
Street	Segment	Existing ADT	No Action ADT	2035 Build- out ADT	No Action PM Peak Hour Volume <sup>12</sup>	2035 Build- out PM Peak Hour Volume <sup>16</sup>	2035 Build- out V/C Ratio
East-West Corridors							
N/NE 145th Street	West of I-5	25,240	30,430	34,360	1,650	1,860	1.12
NE 145th Street	East of I-5	31,790	37,650	41,460	1,630	1,780	1.08
N 155th Street	West of I-5	11,640	14,920	17,950	700	830	0.87
NE 155th Street	East of I-5	9,900	12,380	13,760	610	670	0.71
North-South Corridors							
5th Avenue NE*	I-5 NB on-ramp to 155th Street	7,170	9,230	11,140	670	760	1.09
15th Avenue NE	145th to 150th Street	16,130	20,060	22,290	1,290	1,410	0.71
15th Avenue NE**	150th to 155th Street	14,240	18,640	19,700	1,150	1,210	1.01
Meridian Avenue N	145th to 155th Street	6,220	9,310	11,450	650	750	0.89

Table 3.3-13 Average Daily Traffic Volumes and PM Peak Period Congestion for the

\*The portion of 5<sup>th</sup> Avenue NE between NE 145<sup>th</sup> Street and the I-5 northbound on-ramp is exempt from the City of Shoreline's concurrency standard due to the need to make modifications to an intersection that is currently outside of the City's jurisdiction

\*\* The City allows a V/C ratio of 1.10 for 15<sup>th</sup> Avenue NE, between NE 150<sup>th</sup> Street and NE 175<sup>th</sup> Street due to rechannelization for operational safety



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<sup>&</sup>lt;sup>16</sup> One-directional volume only, signifying the direction with the highest volume



Figure 3.3-16. Average Daily Traffic and PM Peak Congestion for the 2035 Build-out of Alternative 2 – Connecting Corridors



#### **Mitigation Measures**

As stated in previous sections, the length of time until full buildout of the two growth alternatives would enable the City to monitor growth and proactively plan for needed improvements. This should occur as development proceeds in order to provide a sustainable and efficient transportation system within the study area. This section details specific actions the City may take to address growth that is forecast for 2035 Build-out scenario.

## N/NE 145<sup>th</sup> Street

 Implement recommendations from the 145<sup>th</sup> Street Corridor Study

## N/NE 155<sup>th</sup> Street

- Consistent with the TMP, extend the two-way left turn lane from 5<sup>th</sup> Avenue NE to 15<sup>th</sup> Avenue NE with bicycle lanes
- Construct a northbound right-turn pocket at the intersection of N/NE 155<sup>th</sup> Street and 1<sup>st</sup> Avenue NE
- Consider signalization at the intersection of N/NE 155<sup>th</sup> Street and 1<sup>st</sup> Avenue NE

### 5<sup>th</sup> Avenue NE

 Construct a two-way left turn lane from the I-5 NB onramp to N/NE 155<sup>th</sup> Street

#### Meridian Avenue N

 Consistent with the TMP, convert Meridian Avenue N to a three-lane profile with a two-way left-turn lane and bicycle lanes

# **3.3.5 Significant Unavoidable Adverse Impacts**

Under all alternatives, the subarea would be anticipated to experience growth in traffic levels. Given that growth is expected to occur incrementally over many decades, the City and other agencies responsible for transportation services would be able to proactively monitor changes, update plans, and implement needed improvements to address the increased transportation demand. Behavioral changes in the way people travel (such as reduced vehicle household trips in a more walkable neighborhood, use of bike share and car share programs, and increased use of the high-capacity transit system) also would help to offset some of the demand over time. Given these considerations and with implementation of mitigation measures, no significant unavoidable adverse impacts would be anticipated.



# **3.4 Streams, Wetlands, and Surface Water Management**

This section describes the affected environment, analyzes potential impacts, and provides recommendations for mitigation measures related to streams, wetlands, and surface water management.

## **3.4.1 Affected Environment**

## Service Provider

The City of Shoreline owns and maintains the public storm drain utility within City boundaries. The City of Shoreline Surface Water Master Plan (adopted in 2005 and updated in 2011) outlines the surface water management program adopted by the City.

## Drainage Basin

Natural and constructed drainage systems within the City of Shoreline can be divided into seven major basins. The study area for the subarea zoning alternatives is located primarily within the Thornton Creek Basin, plus a small area of approximately 1.45 acres along 155th Street within the Boeing Creek Basin.

### **Thornton Creek**

The Thornton Creek Basin is the largest within the City of Shoreline and drains approximately 2,304 acres in the southeast quarter of the City. South of Shoreline, Thornton Creek meanders roughly five miles through northeastern Seattle before discharging to Lake Washington; Thornton Creek also has a large drainage area within the City of Seattle before draining to Lake Washington.

The basin within City of Shoreline is almost completely developed, with primary land uses being single-family residences and roads. Commercial areas are the next most prevalent land use type, followed by institutional uses. Currently, there is a relatively small amount of multifamily use or apartments. Since I-5 intersects this basin, it and the resulting connector streets and on/off ramps contribute a large volume of impervious surface runoff to the basin.

The Thornton Creek basin drainage system within the City of Shoreline consists primarily of piped and channeled surface water conveyance. Many of the historical Thornton Creek basin watercourses and associated wetlands and floodplains were removed by development, typically during the 1950s and 1960s. The hydrologic benefits offered by these natural features, including aquatic habitat, water quality enhancement, and infiltration and storage of peak flows, have been greatly diminished. Very few natural infiltration or detention features remain within this basin to mitigate peak runoff flows.

Prior to more recent implementation of regulations to mitigate the runoff impacts of development, urbanization within the Thornton Creek basin increased the creek's peak flows, resulting in increased erosion and sedimentation. Development practices contributing to watershed degradation included building homes without adequate drainage systems, filling in drainage ways, and construction without sufficient erosion control measures.



The 145<sup>th</sup> Street Station Subarea drains to four Thornton Creek sub-basins within the City of Shoreline, as shown in 3.4-1. The subarea drains primarily to the Twins Ponds Sub-basin or the Littles Creek Sub-basin. The west portion of the subarea is within the Meridian Park Sub-basin, while a small portion of the eastern edge is within the Hamlin Creek Sub-basin.

The Twin Ponds Sub-basin is downstream of the Ronald Bog Subbasin along the North Branch of Thornton Creek. South of Ronald Bog, Thornton Creek is mostly open channel with three long sections of piped conveyance. The first section of piped conveyance is directly south of Ronald Bog and second passes beneath the King County Metro Bus Facility. Thornton Creek flows into a Washington Department of Transportation (WSDOT)owned piped conveyance system approximate 1200 feet north of the city limits and crosses under I-5 into the City of Seattle at the Jackson Park Golf Course.

Littles Creek flows southward roughly parallel to and approximately a half mile east of I-5. The Littles Creek-Thornton Creek confluence is located within the City of Seattle near 15<sup>th</sup> Avenue NE and NE 130<sup>th</sup> Place. This sub-basin collects drainage from mostly residential areas. The tributary originates at a small detention pond located at the southwest corner of 170<sup>th</sup> Street NE and 15<sup>th</sup> Avenue NE. The stream then flows southward for about a mile within a piped and channelized conveyance system (including 800 feet of private property backyard channel between NE 158<sup>th</sup> Street and NE 155<sup>th</sup> Street) to the Paramount Park Open Space, which has a 6.9-acre wetland system.

The Meridian Creek Sub-basin is approximately 350 acres with a piped conveyance system running southward along Wallingford

Avenue N. West of Meridian Avenue N, Meridian Creek briefly enters an open channel system, flowing eastward into the south pond at Twin Ponds Park and joining the Thornton Creek North Branch.

The Hamlin Creek Sub-basin totals about 348 acres and includes the mostly forested Hamlin Park, the adjacent commercial and educational facilities of Fircrest Campus, and the surrounding residential neighborhood. Within the City of Shoreline, the creek is typically confined to a piped system and has intermittent flow. The Hamlin Creek confluence with Thornton Creek is within the City of Seattle.

#### **Boeing Creek**

The Boeing Creek Basin is the largest drainage basin entirely within the City of Shoreline with approximately 1,740 acres. The majority of the Boeing Creek open channel watercourse is contained within a forested ravine that has fairly good riparian conditions through Boeing Creek Park and through the private Boeing Creek Reserve. Land use is predominantly low-density residential but includes a few larger campus sites and a highdensity commercial corridor along Aurora Avenue N from the N 145<sup>th</sup> Street to approximately N 183<sup>rd</sup> Street. Per the recent Boeing Creek basin plan, the basin is approximately 67 percent impervious surfaces and 90 percent developed.

The study area for the Connection Corridors Alternative extends approximately 1 block into the Boeing Creek watershed along N 155<sup>th</sup> Street with zoning revision proposed to seven parcels covering approximately 1.45 acres. There is limited measurable impact anticipated to the natural environment and stormwater management systems within the Boeing Creek Basin due to the



small size of the area with proposed changes in zoning. Half of this area is currently zoned Mixed Use, R-24 and R-12. The remaining four parcels are zoned as R-6. The proposed zoning revision to the 1.45 acre, under one of the two planned action alternatives are would be to MUR-45. Due to the relatively insignificant size of the area within the Boeing Creek Basin (less than 0.1% of the total basin), analyses of the minor impacts are not further evaluated within this study.

#### Wetlands

There are ten classified wetland areas within the Thornton Creek watershed in the City of Shoreline. Within the study area there are six wetland areas totaling approximately 14 acres, including: two within Twin Ponds Park (5.4 acres total); Peverly Pond east of Twin Ponds Park (>1 acre); a small 0.4 acres wetland near N 154th Street adjacent to Interstate 5; and two within Paramount Open Space (6.9 acres total).

### Aquatic Habitat

The wetlands and stream riparian corridors within the subarea provide habitat for aquatic and migratory species. Protecting these resources is a high priority for the City. In general, fish habitat is relatively poor throughout the Thornton Creek basin, due primarily to fish passage barriers, riparian encroachment, and bank hardening. Natural stream systems provide a variety of functions such as facilitating food chain production, providing habitat for nesting, rearing and resting sites for aquatic, terrestrial and avian species, and maintaining the availability and quality of water. However within the Thornton Creek basin, existing piped stream sections and some portions of the open channel stream sections typically provide little in the way of stream function other than basic conveyance.

Species of fish observed at various locations in the Thornton Creek basin include cutthroat and rainbow trout, largemouth bass, carp, sculpin, dace, stickleback, and sunfish. Juvenile Chinook and Coho salmon have also been planted in the creek within Seattle. Many of the above-mentioned species can be found within small pond/wetland areas such as Ronald Bog, Twin Ponds, and Peverly Pond, which likely provide excellent food sources.

### Surface Water Management

There are several natural stormwater features within the subarea. The wetlands and ponds within Twin Ponds Park provide some natural attenuation for peak stormwater flows as well as water quality enhancement. The wetland areas in the Paramount Park Open Space similarly provide some attenuation storage and water quality enhancement.

Additionally, there are several smaller-scale detention and water quality facilities within the subarea. These include underground stormwater detention tanks and vaults, both publicly and privately owned, of varying sizes at multiple locations. There are three existing City-owned low impact developmentLow Impact Development (LID) facilities within or directly adjacent to the subarea. These facilities are bioretention systems that provide water quality treatment. One bioretention system is along 17th Avenue NE, between NE 150th Street and NE 145th Street. A second bioretention swale, located at NE 148th Street and 5th Avenue NE, has recently been constructed. There is also a small bioretention facility at 15209 Wallingford Place, just west of the subarea. Thornton Creek along the west side of I-5, including the ponds within Twin Ponds Park, is shown as a high risk flood area per the Proposed FEMA Floodplain Map, dated July 2012.

## Surface Water Collection Systems

Table 3.4-1 summarizes the total surface water facilities managed and maintained by the City of Shoreline (taken from the Surface Water Master Plan). Table 3.4-2 summarizes the surface water pipes within the subarea. The majority of pipes within the subarea are concrete; other common pipe materials include corrugated metal and plastic.

South of N 163rd Street and through the subarea, the main branch of Thornton Creek is within the Interstate 5 right-of-way owned by WSDOT. This includes the existing piped section of Thornton Creek, from approximately N 149th Street to the southern City limits. While the City was incorporated in 1995, most areas of Shoreline were originally developed by the 1970s. Consequently, the majority of the City's surface water infrastructure is over 40 years old and is approaching or has exceeded the typical 50-year life expectancy.

Many of the streets within the subarea do not possess curb and gutter. Runoff is typically collected by shallow, oftentimes informal roadside swales, raised pavement edges and asphalt berms, or with catch basins and conveyed along a series of ditches and pipes. In some areas lacking a formal drainage system, localized sheet flow runoff disperses to adjoining pervious areas. The typical conveyance system within the subarea consists of pipe conveyance along arterials (principal, minor, and collector) with ditches along the smaller local secondary streets. Within the subarea, Meridian Avenue N, 5<sup>th</sup> Avenue NE, 15<sup>th</sup> Avenue NE, and N/NE 155<sup>th</sup> Street have curb and gutter collection with piped conveyance.

Table 3.4-1 Surface Water Drainage System Infrastructure

Drainage System Component (City Wide)	Estimated Quantity	Unit
Surface water pipe	640,000	Linear Foot (LF)
Catch Basins	7,626	Each
Ditches	150,000	LF
City Owned Stormwater Facilities	34	Each
City Owned Water Quality Facilities	37	Each
Dams	5	Each
Privately Owned Stormwater Facilities	263	Each
Pump Stations	8	Each

#### Table 3.4-2 Surface Water Drainage System Infrastructure

Subarea Drainage System Components	Estimated Quantity	Unit	
Surface water pipe (4" to 8" diameter)	5,400	LF	
Surface water pipe (12" to 18" diameter)	29,200	LF	
Surface water pipe (greater than 18" diameter)	8,000	LF	



With development as projected within the subarea, many of the local secondary streets will be improved to accommodate higher volumes of vehicles and pedestrians. When this occurs, shallow swale and raised edge drainage collection areas and areas lacking formal drainage will be converted to curb, gutter, and sidewalk, requiring installation of new conveyance networks with detention and treatment facilities.

Per current City Municipal Code 20.70, redevelopment projects will generally require frontage improvements constructed at the developers expense. These improvements can include dedication of right-of-way, new curb and gutter, new or improved sidewalks, drainage improvements, pavement overlays or amenity zone landscaping. The amenity zone landscaping improvements could potentially included bioretention swales to provide water quality treatment and flow control mitigation for the adjacent public right-of-way. Further details regarding potential bioretention use for redevelopment-installed amenity zones within the right-ofway are yet to be determined by the City.

## **Current Demand**

As part of this study, surface water runoff within the subarea was estimated using the Rational Method. The analysis provided a rough estimated change in unmitigated peak discharge through the City's surface water conveyance system within the subarea during a 25-year storm event, for each zoning option. Percent impervious surface area for the subarea under existing conditions was compared to proposed improvements. In order to assess surface water runoff generation within the subarea, this analysis references the Seattle Public Utilities methods for computing stormwater fees for residential units within the City of Seattle and neighboring communities. The SPU stormwater fee structure provides a relative impervious surface area based on average lot size and type of development. This DEIS study estimated the amount of stormwater reaching the municipal surface water collection system based the range of parcel sizes.

The analysis of change in peak discharge was for DEIS planning purposes only and does not reflect actual expected postredevelopment conditions. The purpose of the study was to receive a relative understanding of a conservative ("worst-case scenario") unmitigated potential increase in surface water discharge potential zoning increases will have on the current surface water collection system. This simplified analysis has no bearing on the existing Surface Water Master Plan (SWMP). Actual improvements and exact size of conveyance infrastructure will not be known until extensive hydraulic modeling is completed for the subarea. More detailed future analysis will account for current redevelopment regulations (which typically lead to a net decrease in peak flows leaving the site).

Runoff from commercial and institutional development was analyzed based on the assumption that the majority of these developments will have similar impervious surface areas to very heavy residential units. Under this assumption the average runoff factor would be 0.76 (76 percent impervious). **Table 3.4-3** depicts the estimated percentage of impervious surface area for residential homes, based on size.

The City of Shoreline's surface water conveyance system was analyzed using the Rational Method, based on a 25-year storm event, and the percent of impervious surface area for each zone.



Calculations by area (in acres) were multiplied by the applicable average runoff factor in Table 3.4-2 for each zoning/density type. (Example: R-6 zone = 7,000 to 10,000 square foot lots, and has an average runoff factor of 0.48.)

Calculations were based on Chapter 3 of the 2009 King County Surface Water Design manual: 25-year, 24-hour isopluvial showed an average 2.75 inches of precipitation; typical time of concentration was estimated at 30-minutes for each sub-basin within the subarea. Surface water runoff rates were estimated based on the following rational method calculation

Peak Flow (cfs) = Runoff Factor (see Table 3.4-2) x Area (acres) x 2.75 (25-year storm precipitation amount in inches) x 0.29 (peak runoff factor for a 30-minute time of concentration)

Using the rational method provides a conservative estimate of the peak flows for each alternative. These flows were used as a comparison representing the percent increase for unmitigated flow due to the increased impervious area associated with the planned action alternatives. Medium- and large-sized redevelopment will trigger flow control mitigation requirements (see Section 3.4.3b) that would decrease net runoff from the redeveloped sites. Any potential net increase in postdevelopment peak flows would need to be accommodated by the downstream conveyance system. Such an increase in net peak flows would likely require downstream implementation of flow control. In portions of the subarea without established conveyance systems, new conveyance system improvements would likely be needed as development occurs. Table 3.4-3—Estimated Impervious Surface Area for Residential Homes

**Small Lot Residential** 

Class	SF	% Impact	Avg. Runoff Factor		
		-			
Tier A	<3,000	N/A	0.65		
Tier B	3,000 to < 5,000	N/A	0.53		
Tier C	5,000 to < 7,000	N/A	0.51		
	7,000 to <				
Tier D	10,000	N/A	0.48		
General Servio	General Service/Large Lot Residential				
Undeveloped	Regular	0-15%	0.18		
	Low Impact	0-15%	0.31		
Light	Regular	16-35%	0.32		
	Low Impact	16-35%	0.41		
Moderate	Regular	36-65%	0.43		
	Low Impact	36-65%	0.53		
Heavy		65-85%	0.66		
		86%-			
very Heavy		100%	0.76		



## **3.4.2** Analysis of Potential Impacts

## 3.4.2 a Impacts Common to All

## Alternatives

Both private redevelopment and public improvements within the right-of-way (including roadways and pedestrian/bicycle facilities) require stormwater system improvements for collection and conveyance, flow control, and water quality. A variety of stormwater improvements can address these needs, including conventional collection and conveyance, storage, and treatment infrastructure as well as LID facilities.

Redevelopment under both planned action alternatives are anticipated to decrease runoff to Thornton Creek and improve water quality in comparison to existing conditions. Redevelopment of parcels, per proposed zoning revisions, would require flow control and water quality mitigation following current stormwater regulations. Larger redevelopments would likely require stormwater mitigation for both new and replaced impervious surfaces within the improvement site. Current development was largely completed before extensive stormwater mitigation was required. Additionally, it should be noted that under the No Action alternative, redevelopment following current zoning would typically be smaller in scale and less likely to trigger significant flow control mitigation if impervious surface are not increase beyond minimum thresholds described in Section 3.4.3 b.

This analysis provides a planning-level assessment of the level of improvements that will be needed to accommodate growth

under each of the action alternatives. The two action alternatives within the subarea would both result in redevelopment and change, requiring stormwater utility improvements to accommodate. Once the re-zoning is adopted, each development would be responsible for conducting detailed hydraulic and hydrologic analysis for the proposed changes in land use within the subarea, which would then be used to confirm potential adjustments to the stormwater system.

Since the majority of surface water collection pipes are reaching the end of their serviceable life, the Surface Water Utility will need to conduct systematic condition assessment of the subarea pipes (within the larger Thornton Creek basin). Once failing pipes have been identified, they will need to be addressed by the Stormwater Pipe Repair and Replacement Program, an ongoing capital improvement program project to repair and replace damaged pipes.

Undersized pipes will be identified through observation of problematically underperforming pipes as well as hydraulic and hydrologic modeling analyses. In order to adequately convey runoff at the City's targeted level of service, the 5,400 feet of existing stormwater pipes less than or equal to 8" diameter should receive special attention for potential upsizing.

## Low Impact Development and Subregional Facilities

Redevelopment along streets and within public rights-of-way will bring the opportunity to implement LID such as bioretention swales, stormwater planters, filter systems, rain gardens, pervious pavements, and other features. Successful integration of



these elements will reduce the amount of conventional stormwater infrastructure improvements needed in the subarea. Implementation of a system of subregional surface water management facilities in the subarea could reduce the amount of facilities that need to be constructed on individual redevelopment sites. Benefits associated with subregional facilities are described in more detail under Mitigation Measures

## 3.4.2 b Future Growth Demand

## Forecasting

Future growth demand forecasting for surface water infrastructure was performed by Otak, Inc. The analysis is based on an estimated percent impervious for the projected residential and commercial population forecasting for each zoning alternative. The demand forecasting is used specifically for this EIS analysis for the subarea based on a planning level of analysis. Detailed hydraulic modeling would need to be completed by utility providers in the future as part of updating comprehensive plans/master plans. Demand was forecasted for build-out of each alternative (No Action, Connecting Corridors, and Compact Community), as described in Chapter 1, 2 and 3.1 of this DEIS.

## Surface Water

Surface water management is not directly impacted by population; however, more development typically produces larger areas of impervious surface, which if unmitigated would cause an increase runoff volumes and peak flows, leading to downstream impacts. It should be noted that redevelopment projects would be subject to Department of Ecology regulations for flow control and water quality. (Refer to discussion under 3.4.3b later in this section.) Integration of low impact development (LID) and green stormwater infrastructure into redevelopment projects can reduce the demand generated and have other environmental benefits. LID treatments are encouraged by policies in the City's Comprehensive Plan, as well as in the Subarea Plan and by Code.

Surface water management demand, based on precipitation rates for the 25-year peak storm event discussed in section 3.4.1c of this report, and percent increase in unmitigated stormwater flows each zoning alternative is shown in **Table 3.4-4**.

Redevelopment within the within the study area will decrease surface water runoff rates and improve water quality when the development triggers surface water mitigation requirements. Analyses of potential new or upsized conveyance systems are based on unmitigated stormwater flow as a percent increase over existing zoning build-out conditions. Conveyance needs based on unmitigated stormwater flows would be a conservative impact in areas where runoff is conveyed to a downstream subregional flow control facility, as described in Section 3.4.3 c. The changes in impervious area and associated increased peak runoff, based on the 25-year, 24-hour event, are based on the growth estimates per the Traffic Analysis Zones (TAZ), as described in Chapter 3.3 and shown in Figure 3.2-1 of this DEIS.

Alternative 3 is projected to create an unmitigated increase of surface water flow for each sub basin of Thornton Creek as shown in **Table 3.4-4**. Analysis per the TAZ growth estimates project the highest increase in unmitigated storm flow runoff would be



within TAZ 138 with an increased surface water peak of 321% over existing conditions.

#### Alternative 1—No Action

Alternative 1—No Action was assumed to have the same surface area as the existing system. Currently, the majority of the subarea is zoned R-6, and would remain so under Alternative 1—No Action. The total projected flow rate for Alternative 1—No Action is considered the base condition of storm water runoff for the peak 25-year, 24-hour event peak runoff flow. TAZs 94, 95, 96, and 135 are projected to have the highest surface water discharge rates due to current zoning densities.

Under Alternative 1—No Action, there would be limited redevelopment requiring LID techniques or investment in stormwater capital projects, so existing drainage issues would continue. Redevelopment following current zoning would be smaller in scale and may not trigger flow control mitigation if impervious surface are not increase beyond minimum thresholds described in Section 3.4.3 b.

#### Alternative 2— Connecting Corridors

Alternative 2 is projected to create an unmitigated increase of surface water flow for each sub-basin of Thornton Creek as shown in **Table 3.4-4**. The TAZs projected to see the most increase in storm flow runoff would be TAZs 138 with an increased surface water generation of 321% percent over existing conditions. The other TAZ with higher increase in peak flow include TAZ 130 with an increase of 37%, TAZ 97 with an increase of 33%, TAZ 99 with an increase of 33% percent, TAZ 100 with an increase of 30%

percent, TAZ 137 with an increase of 25% percent, TAZ 103 with an increase of 19%, and TAZ 129 and TAZ 136 both with an increase of 14%. The other TAZ with zoning modifications are estimated to be less than a 10% increase.

#### Alternative 3—Compact Community

Alternative 3 is projected to create an unmitigated increase of surface water flow for each sub-basin of Thornton Creek as shown in **Table 3.4-4**. Analysis per the TAZ growth estimates project the highest increase in unmitigated storm flow runoff would be within TAZ 138 with an increased surface water peak of 321% over existing conditions. The other TAZ with higher increase in peak flow include TAZ 130 with an increase of 37%, TAZ 97 with an increase of 33%, TAZ 99 with an increase of 33% percent, TAZ 100 with an increase of 30% percent, TAZ 137 with an increase of 25% percent, and TAZ 103 with an increase of 19%. The other TAZ with zoning modifications are estimated to be less than a 10% increase.



		ALTERNATIVE 2—	ALTERNATIVE 3—		
	ALTERNATIVE 1—	CONNECTION	COMPACT		
	NO ACTION	CORRIDORS	COMMUNITY		
		% Increase from	% Increase from		
		Existing*	Existing*		
Meridian Sub-Basin	Base Condition	6%	1%		
Twin Ponds Sub-Basin	Base Condition	16%	11%		
Littles Creek Sub-Basin	Base Condition	14%	11%		
Hamlin Sub-Basin	Base Condition	2%	2%		

Table 3.4-4—Unmitigated increase in Stormwater Flow, All Alternatives

\* Percent increase in conveyance sizing for unmitigated stormwater flows with zoning revisions.

## **3.4.3 Mitigation Measures**

## **3.4.3 a Incorporated Plan Features**

Incorporated plan features include improvements to services and facilities that are already being planned per the Stormwater Master Plan Update. Additional improvements to the ones listed will be necessary to accommodate future development, depending on which land use plan is implemented. Refer to Section 3.4.3c for an approximate list of improvements necessary for each alternative in relation to the affected utility. Planned utility improvements in the subarea, along with additional recommended improvements to support implementation of the action alternatives (Alternatives 2 or 3) are illustrated in **Figures 3.4-1 through 3.4-2** at the end of this section.

Two drainage issues identified within the City's Surface Water Master Plan Update are within the subarea. There are a number of drainage improvements planned upstream of the study area, but changes for this study area would not impact the design of the upstream projects. The two, relatively isolated drainage issues, within the study area are along Little Creek and a flooding catch basin near NE 148th Street and 15th Avenue NE. The NE 148th Street Infiltration Facilities CIP is planned to be constructed in the near future to address this localized drainage issue. If future growth occurs within the subarea, the capacity of the conveyance systems will need to be further evaluated.

There are also nine aquatic stream or wetland problems that have been indentified within the study area in the vicinity of Twin Ponds, including multiple of structural fish-passage barriers as well as invasive plant species encroaching into restoration areas. These aquatic improvement projects are not directly linked to the planned action alternatives, but stream or wetland enhancements within the subarea could potentially address some of these existing impacts.

# **3.4.3 b Applicable Regulations and Commitments**

## **Critical Area Ordinances**

Through City of Shoreline Municipal Code, Chapter 20.80 –Critical Areas, the City has identified six critical areas that require protection and development buffers to protect the environmentally critical areas while accommodating the rights of property owners to use their property in a reasonable manner. The six environmentally critical areas are geologic hazard areas, fish and wildlife habitat conservation areas, wetlands, flood hazard areas, streams, and aquifer recharge areas.

## Washington State Department of Ecology and City of Shoreline Surface Water Management Requirements

The City of Shoreline Municipal Code, Chapter 13.10 – Surface Water Utility, adopts the most recent version of the Stormwater Management Manual for Western Washington (SWMMWW) published by the Washington State Department of Ecology. This manual requires flow control and water quality treatment for new and redevelopment projects that exceed specific hard surface area thresholds. Water quality mitigation is required for hard surfaces that are considered pollution generation surfaces.

Redevelopment projects that add 5,000 square feet or more of new hard surface area are required to implement flow control and water quality mitigation. Additionally, redevelopment projects for which the total of new and replaced hard surfaces is 5,000 square feet or more and the assessed value by greater than 50 percent are required to provide flow control and water quality mitigation for new and replaced hard surface areas. Redevelopment projects that add or replace greater than 2,000 square feet and less than 5,000 square feet or hard surface are required to utilize on-site stormwater management to minimize runoff leaving the site.

Integration of LID and green stormwater infrastructure into redevelopment projects can help manage stormwater with a similar process to that within natural systems. Bioswales, rain gardens, and other features capture and retain water onsite, allowing time for it to soak into the soil, where it is naturally filtered. This process also captures pollution and improves water quality. LID treatments are encouraged by policies in the City's Comprehensive Plan, as well as in this Subarea Plan, and are required mitigation element in the SWMMWW.

The City of Shoreline has adopted a Western Washington Phase II National Pollutant Discharge Elimination System (NPDES) Permit to control pollutant loads and reduce peak flows from developed sites and municipal facilities within the city. There are five program components pertaining to the NPDES Permit. Components 1 through 3 are Public Education and Outreach, Public Involvement and Participation, and Illicit Discharge Detection and Elimination. These three components would not change under the three alternatives. The extent of implementation of the remaining two components, as described below, would vary depending on development growth within the subarea.



### NPDES Component #4 – Controlling Runoff from New Development, Redevelopment, and Construction Sites

This goal requires that the City of Shoreline develop, implement, and enforce a program to reduce pollutants in stormwater runoff from new development, redevelopment, and construction site activities. The NPDES Permit prioritizes LID as the preferred and commonly used approach to site development.

Another major aspect of this component is ongoing maintenance and inspection of surface water facilities. The City is currently meeting this goal by enforcing that private developers maintain their private surface water facilities permitted since 2007. The City of Shoreline inspects several hundred surface water facilities on a rotating inspection cycle to ensure all surface water facilities are functioning as designed.

Additionally, in 2009 the City of Shoreline adopted the Department of Ecology Low Impact Development Manual, which requires that best practices be used unless shown to be infeasible.

## NPDES Component #5 – Municipal Operations and Maintenance

This goal requires that the City of Shoreline reduce potential impacts to water quality through its operations and maintenance division of public infrastructure. The Roads Division of the City of Shoreline follows guidance from the ESA Regional Road Maintenance Program Guidelines. The Surface Water Division implements a rigorous stormwater system inspection, maintenance, and cleaning program. The Parks Department adopted an Integrated Pest Management Program. Additionally, all City Maintenance Yards operate under a Surface Water Pollution Prevention Plan (SWPPP) and are regularly inspected to assure compliance with the SWPPP.

A major aspect of this component is inspecting all municipally owned and operated catch basins and inlets at least once before August 1, 2017. Additionally, the City of Shoreline is committed to using applicable best management practices (BMPs) associated with runoff control during routine maintenance, and using a Work Order software program to track inspections and maintenance/repair activities.

These two program components are applicable to future development within the subarea, in that future growth will require additional infrastructure, both public facilities and private. Through the NPDES permit, pursuit of LID improvements to help manage and mitigate surface water runoff is encouraged. The conventional approach to manage stormwater runoff has limitations for recovering adequate storage and distributed flow paths necessary to more closely match pre-development hydrologic function and protect aquatic resources from adverse effects of development.

LID principles and applications present a significant conceptual shift from a structural approach to a source reduction approach. LID improvements utilize native soils, vegetation protection areas, and landscaping strategically distributed throughout the project to slow, store, and infiltrate storm flows. LID improvements are designed into the project as amenities, as well as hydrologic controls. Types of LID improvement include



vegetated roofs, rainwater harvesting, rain gardens, permeable pavement, and bio-retention swales.

New development within the City of Shoreline will need to conform to regulations within the NPDES Permit and the Ecology LID Manual provisions of the Development Code. Development will be required to utilize LID improvements to reduce flows, infiltrate where applicable, and treat stormwater before discharging to the City's surface water network. The City is required to monitor these facilities to verify they are working properly, and maintain LID improvements installed within public right-of-way unless an agreement has been reached with adjacent property owners.

## **3.4.3 c Other Potential Mitigation** Measures

## Surface Water Infrastructure

With development projected within the subarea, many of these streets will be improved to accommodate higher volumes of vehicles and pedestrians, and may be developed into a more urban street network. When this occurs, many of the ditches and sheet flow dispersion areas will be converted to curb, gutter, and sidewalk, requiring installation of new or upsized conveyance system with detention and treatment facilities. The conveyance systems may be bioretention swales or enclosed pipe networks. Dispersed LID facilities should be implemented to the extent feasible within the subarea. **Table 3.4-5** contains a list of surface water conveyance improvements projected to manage future runoff and the increased impervious surface associated with development from each alternative. Locations that would require potential upsizing the existing conveyance systems are based on unmitigated stormwater flow comparisons between the planned action alternatives and current zoning. Increased pipe or swale capacity would primarily be required in locations where runoff is conveyed to a potential downstream subregional flow control facility. New conveyance systems are indentified in areas of the subarea that do not have established conveyance systems under existing conditions or areas where improved pedestrian facilities would likely impact the current drainage flow paths.

Many of the existing streets currently contain ditches and swales at the edges of the roadway. When new developments are constructed within the subarea, many of the streets will be improved to accommodate the added influx of users. When this occurs, many of the open ditches will be converted to a closed pipe network or LID feature. Due to the limited growth projected through the No Action alternative, significant public infrastructure improvements are not anticipated.



		Upsized	
	New	Existing	Improved
	Conveyance	Conveyance	Conveyance
Alternative	(LF)	(LF)	Totals (LF)
#1 —			
No Action	0	0	0
#2 —			
Connecting			
Corridors	8,950	14,400	23,350
#3 —			
Compact			
Community	8,050	13,000	21,050

Table 3.4-5—Surface Water Conveyance Improvements

#### Alternative 1—No Action

Since Alternative 1—No Action would contain the same zoning as under existing conditions, no additional conveyance improvements are projected within the subarea. The creation of new households or infill redevelopment could occur under Alternative 1—No Action. New sites and households would be required to manage stormwater related to individual redevelopment when mitigation thresholds are triggered, even though there would be no capital improvements at a larger scale. Under the No Action alternative, pipe replacement would still occur as the service life of the existing stormwater infrastructure is reached. Per the City's Surface Water Master Plan Update, the replacement of pipes is either as facilities fail or through an opportunistic replacement as other roadway or improvements projects are completed adjacent to the required pipe upgrades.

#### **Twenty Year Improvements**

The total length of conveyance improvements that are necessary to accommodate the projected population in 2035 is approximately 6,200 feet. These represent new conveyance systems per the more expansive infrastructure impacts associated with Connection Corridors Alternative with population growth rate estimated at 2.5 percent. New conveyance systems in areas with a minor change in percent runoff between the twenty year growth and existing conditions, less than 10 percent, are not included in the areas of proposed conveyance systems that are listed for the full build-out impacts.

The following new conveyance pipe runs may need to be installed to accommodate the projected population in 2035. 12" diameter or larger pipes or bioretention swales may be necessary under the Twenty Year Improvements:

- a. 1,350 feet along 8<sup>th</sup> Avenue NE from NE 155<sup>th</sup> Street to NE 150<sup>th</sup> Street
- b. 1,800 feet along 6<sup>th</sup> Avenue NE from NE 152<sup>nd</sup> Street to NE 145<sup>th</sup> Street
- c. 2,200 feet along 12<sup>th</sup> Avenue NE from NE 148<sup>th</sup> Street to NE 145<sup>th</sup> Street, and along NE 145<sup>th</sup> Street to 17<sup>th</sup> Avenue NE
- d. 550 feet along NE 151<sup>st</sup> Street from 8<sup>th</sup> Avenue NE to 10<sup>th</sup> Avenue NE
- e. 300 feet along NE 145<sup>th</sup> Street from 6<sup>th</sup> Avenue NE to 5<sup>th</sup> Avenue NE.

#### Alternative 2—Connecting Corridors

23,350 feet of new and/or upsized conveyance systems may be needed to handle projected surface water runoff from future development.



The following existing pipes and ditches may need upsized conveyance systems in the form of larger bioretention swales or pipe networks replaced with a larger diameter pipe to accommodate the increase in impervious surfaces under total build-out of Preferred Alternative #2:

- a. 450 feet along N 150<sup>th</sup> Street from Meridian Avenue N to Corliss Avenue N
- b. 900 feet along Corliss Avenue N from N 150<sup>th</sup> Street to N 147<sup>th</sup> Street
- c. 600 feet along N 149<sup>th</sup> Street from Corliss Avenue N to 1<sup>st</sup> Avenue NE
- d. 600 feet along N 148<sup>th</sup> Street from Street from Corliss Avenue N to 1<sup>st</sup> Avenue NE
- e. 800 feet along 3<sup>rd</sup> Avenue Ne from NE 151<sup>st</sup> Street to NE 153<sup>rd</sup> Street
- f. 400 feet along NE 151<sup>st</sup> Street from 3<sup>rd</sup> Avenue
- g. 2,050 feet along 5<sup>th</sup> Avenue NE from NE 155<sup>th</sup> Street to NE 145<sup>th</sup> Street
- h. 1,450 feet along 5<sup>th</sup> Avenue NE from NE 160<sup>th</sup> St to NE 155<sup>th</sup> Street
- i. 1,100 feet along 12<sup>th</sup> Avenue S south from NE 155<sup>th</sup> Street to NE 150<sup>th</sup> Street
- j. 850 feet along N 152<sup>nd</sup> Street east from 11<sup>th</sup> Avenue NE to 13<sup>th</sup> Avenue NE
- k. 1,200 feet along 8<sup>th</sup> Avenue NE from NE 150<sup>th</sup> Street to NE 147<sup>th</sup> Street
- I. 650 feet along NE 147<sup>th</sup> Street east from 8<sup>th</sup> Avenue NE to 10<sup>th</sup> Avenue NE
- m. 400 feet along 146<sup>th</sup> feet from 9<sup>th</sup> Avenue NE to 9<sup>th</sup> Place NE500 feet along NE 155<sup>th</sup> Street from Wallingford Avenue NE to Meridian Avenue NE

- n. 600 feet along NE 155<sup>th</sup> Street from Meridian Avenue NE to Corliss Avenue NE
- o. 500 feet along NE 154<sup>th</sup> Street from Meridian Avenue NE to Corliss Avenue NE
- p. 400 feet along NE 150<sup>th</sup> Street from Meridian Avenue NE to Corliss Avenue NE
- q. 300 feet along NE 155<sup>th</sup> Street from 14<sup>th</sup> Avenue
   NE to 12<sup>th</sup> Avenue NE
- r. 650 feet along 5<sup>th</sup> Avenue NE, from NE 160 Street to NE 145<sup>th</sup> Street used for private connections, assuming 50 feet per connection

The following new conveyance systems as bioretention swales or new pipe networks may need to be constructed to accommodate the increase in impervious surfaces under total build-out of Preferred Alternative #2:

- a. 300 feet along NE 154<sup>th</sup> Street (Private Drive) from 3<sup>rd</sup> Avenue NE to 5<sup>th</sup> Avenue NE
- b. 600 feet along NE 149<sup>th</sup> Street from 3<sup>rd</sup> Avenue NE to 5<sup>th</sup> Avenue NE
- c. 900 feet along 6<sup>th</sup> Avenue NE from NE 155<sup>th</sup> Street to NE 152<sup>nd</sup> Street
- d. 1,350 feet along 8<sup>th</sup> Avenue NE from NE 155<sup>th</sup> Street to NE 150<sup>th</sup> Street
- e. 550 feet along NE 151<sup>st</sup> Street from 8<sup>th</sup> Avenue NE to 10<sup>th</sup> Avenue NE
- f. 950 feet along NE 151<sup>st</sup> Street from 8<sup>th</sup> Avenue NE to 10<sup>th</sup> Avenue NE and along 10<sup>th</sup> Avenue NE to an existing outfall into Paramount Park
- g. 2,200 feet along 12<sup>th</sup> Avenue NE from NE 148<sup>th</sup>
   Street to NE 145<sup>th</sup> Street, and along NE 145<sup>th</sup>
   Street to 17<sup>th</sup> Avenue NE



- h. 1,800 feet along 6<sup>th</sup> Avenue NE from NE 152<sup>nd</sup> Street to NE 145<sup>th</sup> Street
- i. 300 feet along NE 145<sup>th</sup> Street from 6<sup>th</sup> Avenue NE to 5<sup>th</sup> Avenue NE

#### Alternative 3—Compact Community

Approximately 21,050 feet of new and/or upsized conveyance systems may be needed to handle projected surface water runoff from future development.

The following existing pipes and ditches may need upsized conveyance systems in the form of larger bioretention swales or pipe networks replaced with a larger diameter pipe to accommodate the increase in impervious surfaces under total build-out of Preferred Alternative #3:

- a. 450 feet along N 150<sup>th</sup> Street from Meridian Avenue N to Corliss Avenue N
- b. 900 feet along Corliss Avenue N from N 150<sup>th</sup> Street to N 147<sup>th</sup> Street
- c. 600 feet along N 149<sup>th</sup> Street from Corliss Avenue N to 1<sup>st</sup> Avenue NE
- 600 feet along N 148<sup>th</sup> Street from Street from Corliss Avenue N to 1<sup>st</sup> Avenue NE
- e. 800 feet along 3<sup>rd</sup> Avenue Ne from NE 151<sup>st</sup> Street to NE 153<sup>rd</sup> Street
- f. 400 feet along NE 151<sup>st</sup> Street from 3<sup>rd</sup> Avenue
- g. 2,050 feet along 5<sup>th</sup> Avenue NE from NE 155<sup>th</sup> Street to NE 145<sup>th</sup> Street
- h. 1,450 feet along 5<sup>th</sup> Avenue NE from NE 160<sup>th</sup> St to NE 155<sup>th</sup> Street
- 1,100 feet along 12<sup>th</sup> Avenue S south from NE 155<sup>th</sup> Street to NE 150<sup>th</sup> Street

- j. 850 feet along N 152<sup>nd</sup> Street east from 11<sup>th</sup> Avenue NE to 13<sup>th</sup> Avenue NE
- k. 1,200 feet along 8<sup>th</sup> Avenue NE from NE 150<sup>th</sup> Street to NE 147<sup>th</sup> Street
- I. 650 feet along NE 147<sup>th</sup> Street east from 8<sup>th</sup> Avenue NE to 10<sup>th</sup> Avenue NE
- m. 400 feet along 146<sup>th</sup> feet from 9<sup>th</sup> Avenue NE to 9<sup>th</sup> Place NE
- n. 650 feet along 5<sup>th</sup> Avenue NE, from NE 160 Street to NE 145<sup>th</sup> Street used for private connections, assuming 50 feet per connection
- o. 300 feet along NE 154<sup>th</sup> Street (Private Drive) from 3<sup>rd</sup> Avenue NE to 5<sup>th</sup> Avenue NE
- p. 600 feet along NE 149<sup>th</sup> Street from 3<sup>rd</sup> Avenue
   NE to 5<sup>th</sup> Avenue NE

The following new conveyance systems as bioretention swales or new pipe networks may need to be constructed to accommodate the increase in impervious surfaces under total build-out of Preferred Alternative #3:

- a. 900 feet along 6<sup>th</sup> Avenue NE from NE 155<sup>th</sup> Street to NE 152<sup>nd</sup> Street
- b. 1,350 feet along 8<sup>th</sup> Avenue NE from NE 155<sup>th</sup> Street to NE 150<sup>th</sup> Street
- c. 550 feet along NE 151<sup>st</sup> Street from 8<sup>th</sup> Avenue NE to 10<sup>th</sup> Avenue NE
- d. 950 feet along NE 151st Street from 8<sup>th</sup> Avenue
   NE to 10<sup>th</sup> Avenue NE and along 10<sup>th</sup> Avenue NE
   to an existing outfall into Paramount Park
- e. 2,200 feet along 12<sup>th</sup> Avenue NE from NE 148<sup>th</sup> Street to NE 145<sup>th</sup> Street, and along NE 145<sup>th</sup> Street to 17<sup>th</sup> Avenue NE



- f. 1,800 feet along 6<sup>th</sup> Avenue NE from NE 152<sup>nd</sup> Street to NE 145<sup>th</sup> Street
- g. 300 feet along NE 145<sup>th</sup> Street from 6<sup>th</sup> Avenue NE to 5<sup>th</sup> Avenue NE

## Potential Regional or Subregional Stormwater Facility Implementation

Under Alternatives 2 and 3 there could be an opportunity to implement a regional or subregional stormwater facility project that would serve future growth. A subregional facility could provide mitigation for a smaller area, two to three blocks of redevelopment, with a regional system targeting a larger drainage area. This project could include construction of a centralized stormwater facilities funded through grants and capital improvement planning. Providing centralized facilities can help to catalyze redevelopment by reducing costs of stormwater infrastructure improvements to individual site development and increase the area of developable land on parcels. Similar centralized stormwater facilities have been implemented by other local municipalities, including at the proposed Light Rail Station within the Overlake Village Neighborhood of Redmond. Centralized facilities could provide both flow control and water quality mitigation or the water quality treatment could be implemented through disperse private and public treatment or LID systems.

Implementation of LID and green stormwater infrastructure solutions as part of public right-of-way improvements and onsite development would have a beneficial effect in reducing impacts in the subarea by enhancing stormwater treatment and management. These dispersed facilities would also decrease the potential size of a downstream regional of subregional facility. Potential regional or subregional stormwater facility locations are preferably sited at locations downstream of anticipated development to provide the maximum benefit for the targeted area. However, stormwater mitigation through an area substitution process can be implemented for drainage areas that would be difficult to directly capture due to topography or available facility locations. These stormwater facilities would preferably be implemented within each subbasin for which significant redevelopment is anticipated. Centralized facilities could be collocated within a City park or within the parking lot of a larger commercial or mixed use residential parcel. Locations adjacent to existing or proposed conveyance collection mains would allow water to be directed to the facility with limited new conveyance infrastructure.

Collocation of stormwater facilities within existing or expanded parks or new public plazas would require coordination with through a Park Master Plan process. Collocation of a stormwater facility within Paramount Open Space may be possible pending critical area requirements and long-term City goals for the park. Partnering with Sound Transit to enlarge the proposed stormwater facility at the 145<sup>th</sup> Light Rail Station could also be explored as subregional stormwater facility alternative. The proposed Sound Transit facility could potentially maximize the use of the site as a stormwater vault with a plaza area located above.

Within the Twin Ponds sub-basin there are several a potential locations for a regional stormwater facility. A facility could be collocated within Twin Ponds Park or on one of the larger Mixed



Use Residential Sites located adjacent to existing stormwater conveyance mains on Meridian Avenue N or 1st Avenue N.

For the Littles Creek sub-basin, a parking lot for the larger mixed use residential or community business parcels along 15th Avenue NE could be used for a regional stormwater facility. The stormwater pipe along 15th Avenue NE provides conveyance for a significant upstream area.

## Potential Stream Daylighting

There are a few locations within the subarea where the existing streams are still in piped conveyance systems that provide a barrier to fish passage. Daylighting opportunities of the streams within the subarea are not anticipated within the City's current CIP planning and budget, but there may be future opportunities to daylight as the subarea is redeveloped. Some potential daylighting projects would likely require partnering with other agencies or could be explored through updates to the parks master plans adjacent to the location that the current streams are located.

As described in the Thornton Creek Basin Plan, there are also a number of fish passage barriers along Thornton Creek that are downstream of the subarea and outside of the Shoreline city limits. As Thornton Creek crosses under I-5, the creek is piped for approximately 1,950 feet. A potential new alignment along the west side of I-5 parallel to the southbound exit to NE 145th Street could reduce the length of this pipe crossing. This improvement would require coordination with the Washington Department of Transportation (WSDOT) and adjacent property owners. Funding for a large-scale daylight project at this location is not currently available, but could be explored as a partnering opportunity with WSDOT or Sound Transit and/oor through grant funding opportunities.

There appears to be limited area along Meridian Creek with potential for daylighting pipes sections to an open channel system. Some of these isolated areas would require with acquisition of additional public land.

Littles Creek is within a piped conveyance system through the entire upper reach until the open channel south of NE 152nd Street that flows into Paramount Open Space. To daylight Littles Creek upstream of NE 152nd Street would likely require acquisition of private land adjacent to 12th Avenue NE or between private parcels between NE 155th Street to NE 158th Street.

Hamlin Creek is characterized as an intermittent stream in the Surface Water Master Plan. This stream would like have limited environmental benefit provided by daylighting improvements.

## The Green Network

A concept proposed under either of the two action alternative calls for creation of a green network of sidewalks, trails, bicycle lanes, parks, stream corridors, wetlands, and natural areas throughout the subarea, implemented over time with redevelopment. Green infrastructure and low impact development stormwater management and water quality treatment facilities would be a part of this network. For an enlarged illustration of the green network concept and more discussion, refer to Sections 3.1 and 3.5 of this DEIS.



The green network would begin to be implemented within the next twenty years as redevelopment occurs in the station subarea, with the intent of full implementation over time with build-out of the proposed land uses of the subarea plan.



The Green Network Concept—interconnecting trails, pedestrian, and bicycle facilities in green streets and parks throughout the subarea. This concept would greatly enhance surface water management and water quality in the subarea, reducing flooding and improving habitat conditions.

## 3.4.4 Significant Unavoidable Adverse

#### Impacts

Growth and change would be expected to occur gradually over many decades under both of the action alternatives. Implementation of full build-out of Alternatives 2 or 3 would likely take a number of decades. With application of the capital improvement projects discussed, along with regulatory requirements, no significant unavoidable adverse impacts would be anticipated.

Associated population growth would provide an impact on the existing streams and wetlands within the study area as more people would be visiting and exploring these areas. Measures to protect the natural environment by limiting public access to high habitat portions of the parks may be necessary through fences or constructed boardwalks. These could be implemented as an adaptive management approach.



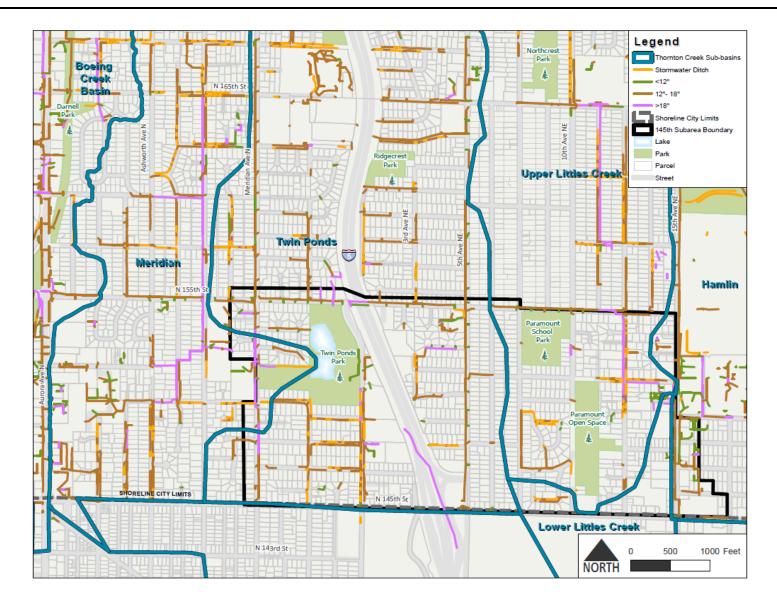


Figure 3.4-1 Existing Surface Water/Stormwater Facilities in the Subarea



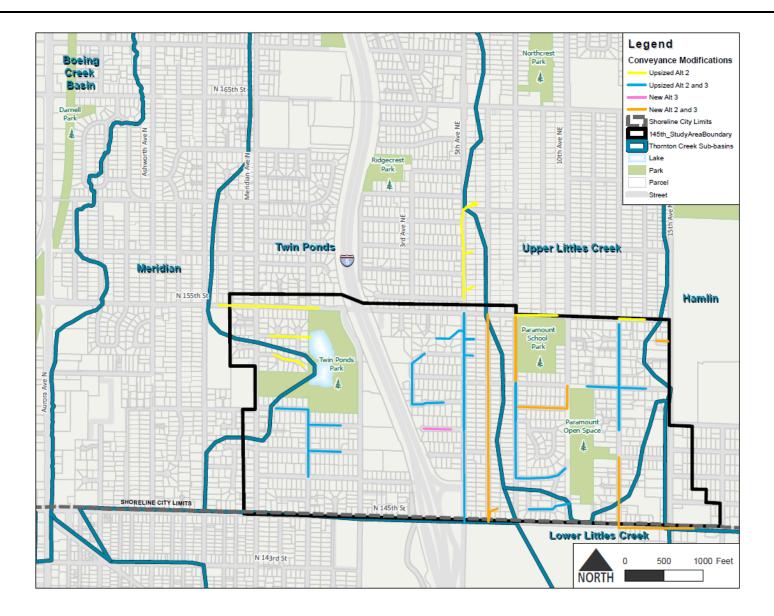


Figure 3.4-2 Planned and Recommended Surface Water/Storm Drainage Improvements in the Vicinity of the Subarea



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# 3.5 Parks, Recreation, Open Space, Natural Areas, and Priority Habitat Areas

This section describes the affected environment, analyzes potential impacts, and provides recommendations for mitigation measures for parks, recreation, open space, natural areas, and priority habitat areas. Refer to Section 3.4 for additional information related to streams, wetlands, and surface water management. Parks within and in the vicinity of the subarea are depicted on **Figure 3.5-1**.

# **3.5.1 Affected Environment**

As of January 2015, there are over 413 acres of public parks, recreation sites, open space, and natural areas in Shoreline. These sites include passive and active recreation parks, open spaces, natural areas surrounding wetlands (including ponds and lakes), trails, and recreational facilities such as public pools and gyms.

The Parks, Recreation, and Cultural Services (PRCS) Department of the City of Shoreline oversees the city's 413 acres of public park properties and provides recreational opportunities for Shoreline residents and the communities in the surrounding region. The department consists of three divisions: Administration, Parks Operations, and Recreation.

## The PROS Plan

From 2010 -2011, the City developed the 2011-2017 Parks, Recreation, and Open Space (PROS) Plan to build a framework for future maintenance and development of Shoreline's parks, recreation, and cultural service programs to serve the community as the population grows, demographics change, and financial situations evolve. The PROS Plan may be downloaded and reviewed for more information at:

http://www.cityofshoreline.com/government/departments/parks -recreation-cultural-services/projects-and-plans/parks-recreationand-open-space-plan

The PROS Plan articulates a vision and goals and policies for the City's parks, recreation, and cultural services program and facilities.

*Vision*—Provide quality parks, recreation, and cultural services to promote public health and safety; protect our natural environment; and enhance the quality of life of our community.

#### **Goals and Policies:**

- 1. The preservation, enhancement, maintenance, and acquisition of facilities
- 2. Diverse, affordable community-based recreational, cultural, and arts programs
- 3. Equitable distribution of resources
- 4. Partnerships that maximize the public use of all community resources
- 5. Community engagement in parks, recreation, and cultural service activities and decisions



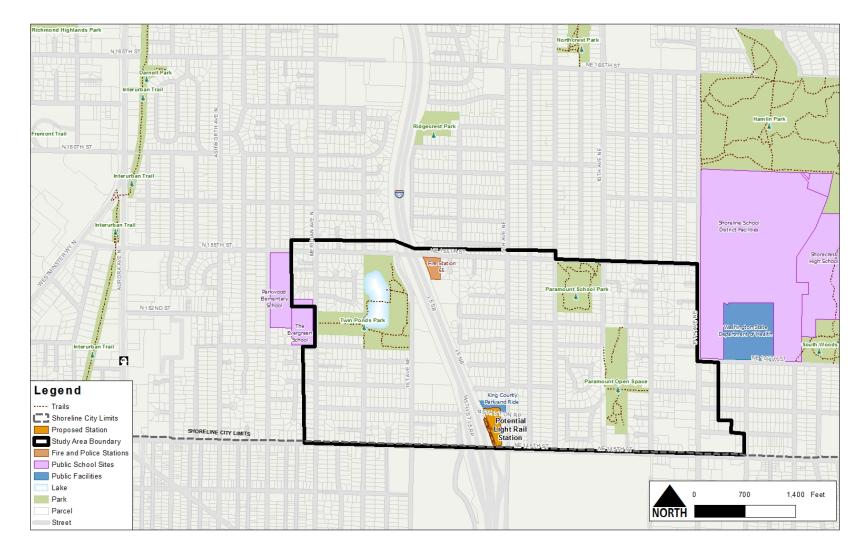


Figure 3.5-1 Parks and Other Community Facilities in the Vicinity of the Subarea



In order to the assess level of service of existing facilities, the PROS Plan classifies parks and recreation facilities into the following categories, described in more detail below.

- Regional Parks
- Large Urban Parks
- Community Parks
- Neighborhood Parks
- Natural Areas
- Special Use Facilities
- Street Beautification

**Regional Parks:** This park classification serves the city and beyond. These are often large parks and include a special feature that makes them unique. They also accommodate a mixture of active and passive activities and sometimes offer a wide range of amenities. Richmond Beach Saltwater State Park is Shoreline's only Regional Park at 32.4 acres of land. This facility provides a citywide level of service.

Large Urban Parks: These parks serve a broad purpose and population, and can serve neighborhood and community park functions. The focus is on providing a mixture of active and passive recreation opportunities that serve diverse interests. There are two parks in Shoreline with this classification, Hamlin and Shoreview, covering a total of 127.5 acres. A facility of this type provides a citywide level of service.

**Community Parks:** The purpose of a community park is to meet community based active, structured recreation needs and to preserve unique landscapes and open spaces. They are designed for organized activities and sports, although individual and family activities are also encouraged. Shoreline has seven community parks totaling over 101 acres. This type of facility typically provides a level of service to populations located within one and a half miles from the park.

**Neighborhood Parks:** A neighborhood park is a basic unit of the park system that serves as the recreational and social focus of the neighborhood within an estimated 15 minute walking time. The overall space is designed for impromptu, informal, unsupervised active and passive recreation as well as more intense recreational activities. Shoreline has seven neighborhood parks ranging in size from 1.8 – 4.5 acres and encompassing a total of 32.6 acres of land. Neighborhood parks typically serve populations located within one-half mile of the park.

Natural Areas: This category includes areas developed to provide aesthetic relief and physical buffers from the impacts of urban development, and to offer access to natural areas for urban residents. These areas may also preserve significant natural resources, wildlife habitat, native landscapes, and open spaces. These areas typically serve populations located within one-half mile from the area. Shoreline has 11 areas categorized as natural areas, which total 84 acres.

**Special Use Facilities:** These facilities provide unique, specific purposes, such as an off-leash Dog area, indoor pool, community recreation or civic center, botanic garden, regional or local trail connector and provide a citywide level of service. Special use facilities in Shoreline include the Shoreline Pool, Spartan Recreation Center, Kruckeberg Garden, and the Interurban and North Crosstown Connector Trails. These facilities are resources to existing and potential future residents of the subarea since they offer a citywide level of service.



**Street Beautification:** Street Beautification sites are small areas or street corridors that have been developed in and around the public right-of-way. These sites provide aesthetic relief, enhance pedestrian safety, and provide limited active recreational opportunities. In the subarea, these sites include Rotary Park, Aurora Corridor, and the North City Business Corridor. Small public gathering spaces, such as urban plazas, pocket parks, and parklets may be located along and adjacent to street corridors, particularly with neighborhood redevelopment.

There are more than 140 acres of park land and recreational facilities within the station subarea or in near proximity to it. Park and Shoreline Public School assets located in proximity to the subarea are described below.

 Hamlin Park: Although the Hamlin Park is located northeast of the subarea and not directly within its boundaries, it is an important resource to existing and future subarea residents. Its size and historical significance to the community are important aspects. The land the park contains was originally acquired by the Hamlin family in 1895.Hamlin Park is the oldest official park in the City's system (and was previously the oldest in King County's system when it was under the County's jurisdiction).

Hamlin Park is classified Large Urban Park at 80.4 acres and was recently improved in 2010. There are several other public facilities adjacent to the park, including Kellogg Middle School, Shorecrest High School, the Fircrest Complex, Shoreline School District warehouse and kitchen, and a Shoreline Parks/Public Works maintenance facility. With a citywide service area, the park provides a variety of active and passive uses and natural areas. It includes several areas with public art, picnic areas, and forest. Recent improvements include new play equipment, picnic shelter, loop walking path, nature trail improvements, , and sport fields.

- **Paramount Open Space:** Classified as a Natural Area, this park is 10.69 acres of forest land located directly east of the proposed station. The site consists of hillsides and slopes as well as adjoining lowlands and wetlands, with streams crossing. There is a small developed area near the southern boundary of the site. Recent improvements include removal of invasive vegetation and construction debris, trail improvements, and a new dedication bench.
- Paramount School Park: Paramount School Park, owned by the Shoreline School District and maintained by the City, is 8.6 acres and located northeast of the proposed station, just south of NE 155<sup>th</sup> St. and northwest of Paramount Open Space. Designated a Community Park, this site is primarily open with a grouping of trees on its northern boundary. The site was master planned in 2000, a skate park completed in 2002, and the rest of the park was open to the public in 2003. The park was constructed on School District property. As part of the City of Shoreline/Shoreline School District Joint Use Agreement, the site could be reclaimed by the School District to develop a future school site to meet population demands. Any recreational assets could still be available to the public for use after school hours.



- *Ridgecrest Park:* This 3.9 acre park is located north of the subarea, and is classified as a Neighborhood Park. The site is located in the central area of the Ridgecrest Neighborhood and consists of both open and wooded areas. The park is adjacent to I-5, and contains steep slopes on the south and east edge. Currently the park is completely surrounded by single-family homes. Recently sports fields have been improved, and there are small maintenance measures planned for the future. This park will be directly impacted by light rail line construction. Sound Transit will be mitigating impacts by dedicating park land and enhancing the park entrance.
- South Woods: South Woods Park is a 15.6 acre open space parcel classified as a Natural Area. It is directly south of Shorecrest High School, and east of the subarea. The property was purchased by Shoreline in 2007, the City developed a pedestrian sidewalk in 2009. The site is now part of the city's park system. The site has received habitat restoration improvements since 2009.
- *Twin Ponds Park:* Twin Ponds Park is the only park west of I-5 within the subarea and mentioned in the report. This 21.6 acre site is designated a Community Park and contains two ponds, a wetland, recreational facilities, and a natural area with a stream. The area surrounding the park is completely developed and currently consists primarily of single-family homes, and Aegis Assisted Living Center to the east. Past improvements include a new community garden, invasive vegetation removal, tree planting, and other facilities improvements (including some parking lot paving and striping).

The Shoreline Public School District is an additional resource for neighborhood park amenities and facilities within and surrounding the subarea. Consideration of service from these facilities increases the availability of park assets to the subarea. In the subarea, school recreation facilities include:

- Kellogg Middle School—full size turf, track-six lanes
- Shorecrest High School—full size turf, track-eight lanes, turf baseball field, discus area (grass), shot put area, tennis courts (4)
- **Parkwood Elementary School**—playground, and grass sports field, basketball court

# Community Interests and the Projected Demand for Additional Parks, Recreation, and Open Space Facilities and Services

During development of the PROS Plan (completed in 2011), a community outreach process was used to identify community needs and inform potential improvements to level of service. The City conducted a Community Needs Assessment Survey. This survey will be updated in 2016 as part of PROS Plan update in 2017. Results of the outreach process and 2010 survey are summarized below.

- Park and recreation usage in the community is high.
- Additional restrooms and walking trails continued to be the most desired park improvements.
- While there are a wide range of park and recreation needs, the City of Shoreline is currently meeting most of

the needs of the community with paved walking and biking trails, playfields, and new neighborhood park amenities (such as picnic shelters, drinking fountains, playgrounds, and walking trails).

- Deficiencies exist between demand and assets with regard to the community's expressed desire for a new aquatic center and cultural arts facility.
- Community participants believed the future focus should be on improving and maintaining existing facilities and developing proactive partnerships.

# Level of Service Assessment

The City uses a combination of community participation and review of the classifications and their service areas described above to assess demand. Classifications set the stage for analyzing need (also described as level of service). Level of service is a term that describes the amount, type, or quality of facilities that are needed in order to serve the community at a desired and measurable standard. The PROS Plan analyzed level of service based on geographic service area standards for community and neighborhood park classifications. (Neighborhood parks have a half mile service area and community parks have a one and one half mile service area.) The City's analysis also takes into consideration the inclusion of Shoreline School District property and other community and large urban parks that provide neighborhood park amenities.

**Figures 3.5-2 and 3.5-3** from the PROS Plan illustrate community park and neighborhood park service areas in the City of Shoreline. As shown in these figures, all of the subarea is located with community park service areas and portions are located within

neighborhood park service areas. Areas of the subarea not served by neighborhood parks or by Shoreline School District sites are in the central southern portion of the subarea, as shown in **Figure 3.5-4** (also from the PROS Plan).

In addition to City of Shoreline parks and recreation resources, the City of Seattle's Jackson Park Golf Course is located immediately south of the subarea, south of NE 145<sup>th</sup> Street. The golf course has walking trails and greenbelt areas that are used by subarea residents.

## Planned Improvements and Desired Amenities

The PROS Plan identified the following projects are listed in the six-year capital improvement plan for 2012-2017 that potentially could include funding of parks and trails in the vicinity of the subarea:

- Parks repair and replacement funding
- Trail corridors
- King County Trails Levy funding

As part of twenty-year capital improvement planning, the PROS Plan also identifies potential new facilities, including the following in proximity to the station subarea. Several improvement projects identified in the plan have already been implemented, and as such these are not listed below.

**Paramount School Park** Pedestrian and bicycle improvements with signage between Paramount School Park and Paramount Open Space

- Picnic shelter reservation kiosk
- Basketball court
- Add picnic tables outside of existing shelter



- Field drainage improvements
- Loop trail mile-markers
- Tree and bench plan
- Frontage and fencing improvements along 155<sup>th</sup> Street at Paramount School Park
- On-street wayfinding signs

#### **Paramount Open Space**

- Neighborhood Park Plane
- Expand Paramount Open Space park through willing seller purchase opportunities
- Park entry improvements including monument signages
- Pedestrian and bicycle connections

#### Hamlin Park

- Internal and on-street wayfinding signs
- Trail mile markers
- Continuation of soft surface trail improvements
- Replace entry signs/improve park pedestrian entrances

#### **Twin Ponds Park**

- Sidewalk and right-of-way improvements along 1<sup>st</sup>
   Avenue NE from 155<sup>th</sup> Street to the south end of Twin
   Ponds Park
- Development of a neighborhood park plan and vegetation management plan (Phase 1)

#### South Woods Park

- Vegetation management plan implementation
- Development of a Neighborhood Park Plan
- Improvement of the entry from Shorecrest High School
- Interpretive signs
- On-street wayfinding signs



Existing community gardens at Twin Ponds Park



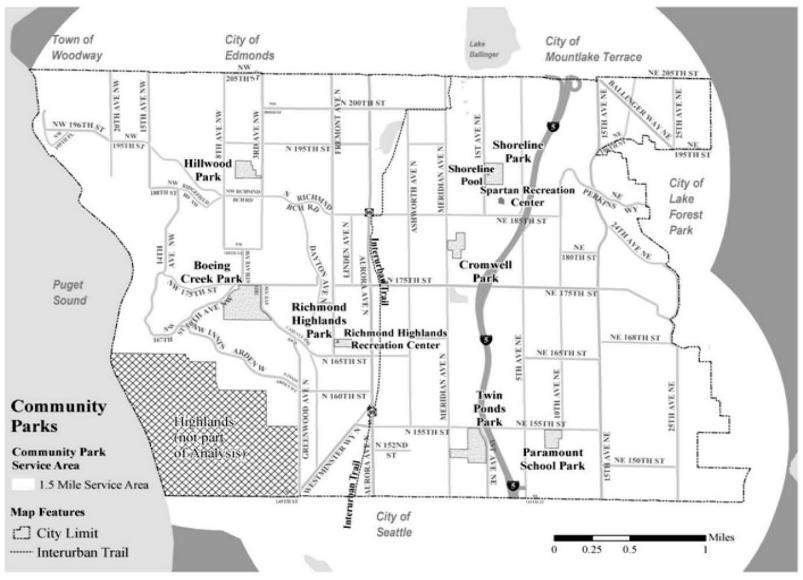
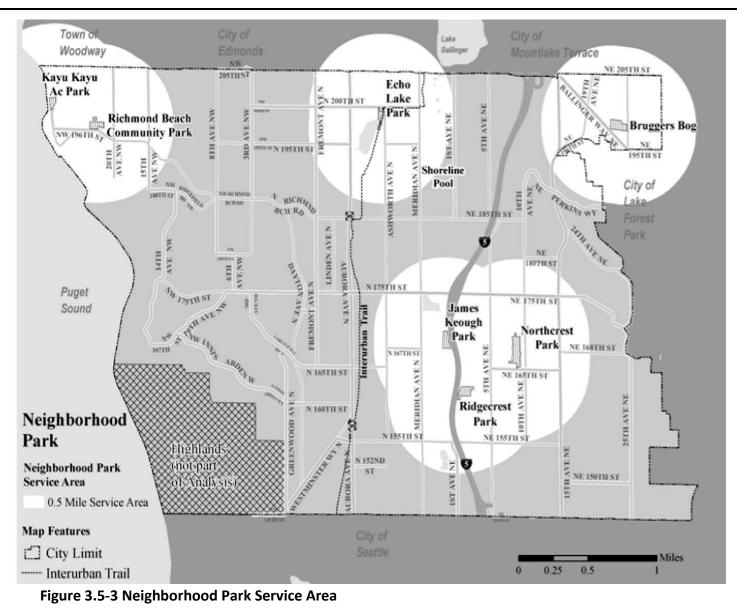


Figure 3.5-2 Community Park Service Area



#### 145th Street Station Subarea Planned Action



SHORELINE

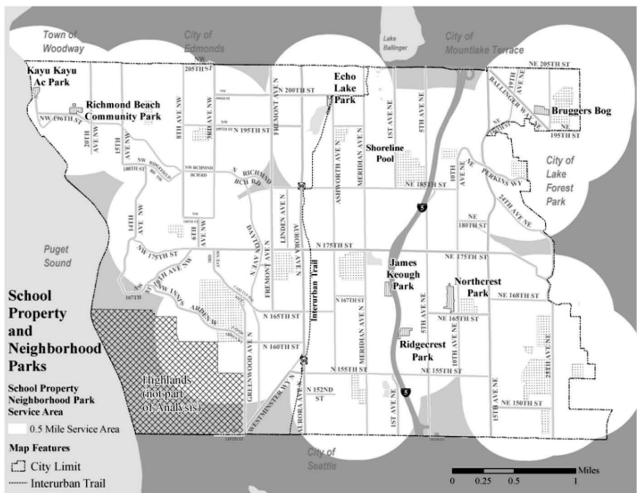


Figure 3.5-4 School District Amenities Service Area



The PROS Plan also identifies desired amenities as capital project ideas not necessarily associated with a specific site. Five major amenities were identified as partnership opportunities with other agencies, such as the Shoreline School District and others:

- Aquatic Facility
- Cultural Arts Center
- Environmental Learning Center
- Farmers Market (currently being hosted by a non-profit organization at City Hall on Saturdays, June through October)
- Trail Connectors

Other desired amenities identified in the PROS Plan include a variety of recreational facilities, such as:

- Basketball courts
- Barrier-free playground
- Community gardens
- Disc golf courses
- Signage (directional, entry, interpretive)
- Skate parks
- Spray parks
- Swings

- Freeride bike parks
- Off-leash dog areas
- Putt-putt golf course
- Pickleball courts
- Tennis courts
- Water trails
- Wi-Fi in parks

The PROS Plan provides twenty-year capital improvement recommendations focused on addressing the needs above. The scope of planned improvements to parks and recreation facilities ranges from master planning and conceptualization to design and implementation of improvements. Timing for these projects was categorized in the PROS Plan as short-term, mid-term, and longterm recommendations.

## Open Space, Trees, Vegetation, and Habitat

Residents characterize Shoreline as a wooded community; this is often cited as a key reason for locating in the area. Large evergreen trees can be seen rising above residential neighborhoods, on hilltops, and even on the periphery of Aurora Avenue. As the city becomes more urbanized, it is a priority to maintain and enhance the tree canopy. In 2011 the City conducted a Urban Tree Canopy Assessment and in 2012, the City took steps to be recognized as a Tree City USA. The City has also developed Vegetation Management Plans for parks, and will track tree canopy over time to gauge the effect of policies related to tree retention and replacement.

Forested open space, wetlands, and native vegetation found on steep slopes and in open space areas are important resources that should be preserved. Trees help stabilize soils on steep slopes, and act as barriers to wind and sound. Plants replenish the soil with nutrients, generate oxygen, and clean pollutants from the air. Native vegetation provides habitat for wildlife. Wetlands and riparian vegetation provide surface water storage and help clean surface water of pollutants and sediment. Aerial photos show that the community is a mosaic of various types of vegetation. The largest, most contiguous areas of native vegetation in Shoreline are primarily found in city parks, publicly owned open space, and privately owned open space areas. These areas include the highest quality wildlife habitat found in the city. However, areas of less intensive residential development also contain mature trees and other native vegetation, which provide secondary wildlife habitat and substantially contribute to the quality of life in Shoreline.

Lakes and wetlands also provide valuable habitat in Shoreline.



There are two lakes in proximity to the subarea: Echo Lake and Ronald Bog. Shoreline's lakes contain pollutants and contaminated runoff, including fertilizers and pesticides from lawns and gardens; oils, greases, and heavy metals from vehicles; and fecal coliform bacteria. The quality of the water in the lakes is a concern to many residents and City staff. Ronald Bog was historically dredged. As urban development has occurred, the process by which the nutrient level and vegetation in these lakes increases has accelerated. It is anticipated that Ronald Bog will eventually revert to a bog.

Wetlands perform valuable functions that include surface and flood water storage, water quality improvement, groundwater exchange, stream base flow augmentation, and biological habitat support. With the exception of the Puget Sound estuarine system, all wetlands in the city are palustrine systems (freshwater). The largest palustrine system is Echo Lake, located to the northwest of the subarea. Ronald Bog also is a large wetland.

Most wetlands in the city are relatively isolated systems and surrounded by development. Under the Shoreline Municipal Code, wetlands are designated using a tiered classification system (from Type I to Type IV) based on size, vegetative complexity, and the presence of threatened or endangered species. No wetlands in the city have received a Class I rating. All wetlands, regardless of size, are regulated under the Shoreline Municipal Code. When a development is proposed on a site with known or suspected wetlands, a wetland evaluation is required to verify and classify wetlands and delineate boundaries and buffer areas. The State Department of Ecology mandates minimum wetland buffer areas based on typology and other factors.

All of the documented wetlands within the city have experienced some level of disturbance as a result of development and human activity. Disturbances have included major alterations, such as wetland excavation, fill, or water impoundment. Some wetland areas occur within parks that receive constant use by people, impacting wetlands areas with human activity, such as trash and trampling of vegetation.

#### **Habitat Protection**

The process of urbanization can result in the conversion of wildlife habitat to other uses. The loss of certain types of habitat can have significant, adverse effects on the health of certain species. Fish and wildlife habitat conservation areas are those that are necessary for maintaining species within their natural geographic distribution so that isolated subpopulations are not created. Designated habitats are those areas associated with species that State or federal agencies have designated as endangered, threatened, sensitive, or candidate species. Currently in the Puget Sound, the bald eagle and Chinook salmon are listed as threatened species by the federal government under the Endangered Species Act.

**Priority Habitat Areas**— The Washington Department of Fish and Wildlife (WDFW) indicates bald eagle territory in the Richmond Beach and Point Wells areas, outside the subarea. WDFW maps and the City's stream inventory indicate the presence of Chinook salmon in portions of McAleer, Thornton, and Boeing Creeks, outside the subarea. Other sources have indicated the presence



of fish in other streams within the city, although the full extent of fish habitat has not been confirmed.

To help restore healthy salmon runs, local governments and the State must work proactively to address salmon habitat protection and restoration. WDFW has developed the Priority Habitats and Species (PHS) Program to help preserve the best and most important habitats, and provide for the life requirements of fish and wildlife. The City has developed mapping of PHS areas based on data provided by the WDFW and other mapping resources.

WDFW provides management recommendations for priority species and habitats that are intended to assist landowners, users, and managers in conducting land use activities in a manner that incorporates the needs of fish and wildlife. Management recommendations are developed through a comprehensive review and synthesis of the best scientific information available. The City has reviewed the PHS management recommendations developed by WDFW for species identified in Shoreline, and used them to guide the development of critical areas regulations that fit the existing conditions and limitations of Shoreline's relatively urbanized environment.

Refer to Figure 3.5-5 for a depiction of urban forest and priority habitat areas that the City has mapped in the vicinity of the subarea. Twin Ponds Park is the only designated priority habitat area in the subarea. Twin Ponds includes 6.4 acres of palustrine forested and palustrine emergent wetland area, according to information in the City's Comprehensive Plan. Stream, riparian, and upland habitats combine with the lower wetland areas to create a habitat mosaic providing habitat for a diverse community of wildlife including river otter, great blue heron, turtles, and various species of hawks. Dominant trees and vegetation include red alder, willow, cedar, cottonwood, red-osier dogwood, and salmonberry. Invasive vegetations such as Himalayan blackberry and morning glory are also found in the area. Emergent areas are dominated by cattail, skunk cabbage, and water parsley.

Urban forest areas are shown in green in Figure 3.5-5 and include Twin Ponds Park, as well as Paramount Open Space, South Woods Park, Hamlin Park, sloped topographic areas, and other locations in the vicinity of the subarea.

The City also has mapped steep slopes (areas above 40 percent sloping terrain). This mapping can be viewed in the Natural Areas supplemental information of the 2012 Comprehensive Plan.

*Critical Areas Ordinance*— The City of Shoreline has an adopted Critical Areas Ordinance and correlating Code requirements (Chapter 20.80). The ordinance specifies regulations related to habitat protection. For example Section 20.80.300 describes mitigation performance standards and requirements, as follows:

- A. Relevant performance standards for other critical areas (such as wetlands and streams) that may be located within the fish and wildlife habitat conservation area, as determined by the City, shall be incorporated into mitigation plans.
- B. The following additional mitigation measures shall be reflected in fish and wildlife habitat conservation area mitigation planning:
  - 1. The maintenance and protection of habitat values shall be considered a priority in site planning and design.

- 2. Buildings and structures shall be located in a manner that preserves and minimizes adverse impacts to important habitat areas. This may include clustering buildings and locating fences outside of habitat areas.
- 3. Retained habitat shall be integrated into open space and landscaping.
- 4. Where possible, habitat and vegetated open space shall be consolidated in contiguous blocks.
- 5. Habitat shall be located contiguous to other habitat areas, open space or landscaped areas both on and offsite to contribute to a continuous system or corridor that provides connections to adjacent habitat areas.
- 6. Native species shall be used in any landscaping of disturbed or undeveloped areas and in any enhancement of habitat or buffers.
- 7. The heterogeneity and structural diversity of vegetation shall be emphasized in landscaping.
- Significant trees, preferably in groups, shall be preserved, consistent with the requirements of Chapter 20.50 SMC, Subchapter 5, Tree Conservation, Land Clearing and Site Grading, and with the objectives found in these standards. (Ord. 398 § 1, 2006; Ord. 238 Ch. VIII § 4(E), 2000).

#### Department of Ecology Surface Water Management

*Regulations*—The Department of Ecology (DOE) requires surface water management compliance of development projects. DOE

regulations list preservation of native trees, vegetation, and undisturbed ground, along with other tools and best practices, as effective methods for managing surface water runoff and enhancing water quality. More information about DOE regulations is provided in Section 3.4 of this FEIS.



Figure 3.5-5 Urban Forest and Priority Habitat Area (Twin Ponds Park) Mapped in the Vicinity of the Subarea



# 3.5.2 Analysis of Potential Impacts

The estimated demand for parks and recreation facilities under the alternatives is analyzed below. **Table 3.5-1** provides a summary of the estimated demand for parks under the alternatives.

## Alternative 1—No-Action Alternative

Under Alternative 1—No Action, the 2035 subarea population growth would place greater demands on the areas park, recreation, and open spaces. The population of the subarea is anticipated to increase to 11,040 by 2035 under the No Action Alternative. This compares to a current population of 8,321 people, indicating an estimated population growth of 2,719 people without any changes to zoning.

Today there are 3,467 households in the subarea and this would increase to 4,600 by 2035 under the No Action Alternative, increasing the number of households by 1,133. There would also be a total of 2,325 employees in the subarea, 730 more than currently exist, and these workers also may have a need for parks and recreation facilities during lunch breaks and before and after the work day.

It is anticipated that the current level of park, recreation, and open spaces in the subarea would be sufficient to support the projected growth under Alternative 1—No Action, with implementation of the improvements in the PROS Plan, including neighborhood park enhancements at Paramount School Park, Paramount Open Space and South Woods. In reviewing the locations of neighborhood parks in proximity to the subarea, it appears that there is a baseline demand for at least one neighborhood park to serve the subarea; however, this demand is mostly addressed by existing school facilities in the area and could be more fully addressed with planned improvements in the PROS Plan for the subarea.

# The Next Twenty Years (Up to 2035) Under Either of the Action Alternatives

Under either of the two action alternatives, the projected total population of residents in the subarea would be 11,207 to 13,635 (assuming a 1.5 to 2.5 percent average annual growth rate) by 2035. There would be an estimated 4,670 to 5,681 total households and 2,148 to 2,614 total employees in the subarea by 2035. This is 2,886 to 5,314 new residents (as well as 1,203 to 2,214 new households and 553 to 1,019 new employees) above current levels in the subarea.

The projected 2035 population level would equate to demand for approximately one new neighborhood park in place by the end of the twenty-year horizon of 2035, if not before under either of the two action alternatives.

When considering the specific type of facilities the increased population would need under the action alternatives, it is important to consider a number of factors, including community involvement, availability of the different classifications of parks and open space, and level of service standards. Community involvement during the subarea planning process has confirmed that residents are interested in ensuring that neighborhood parks and other facilities (playgrounds, public gathering spaces, teen centers, etc.) are available to serve new residents as they move to the area in the future. They are also interested in public art, enhanced streetscapes, and other amenities.

While there appear to be adequate regional and community parks in Shoreline to serve future growth, neighborhood parks will be needed in the subarea as the population increases. The PROS Plan analyzes the target level of service (LOS) for neighborhood parks, through an amenities-driven approach. Refer to pages 4-19 and 4-20 of the PROS Plan for more information.

Based on traditional National Park and Recreation Association (NPRA) standards, it is advisable to have a neighborhood park serving a half-mile area with population of up to 5,000 people. However, it should be noted that these standards are used with discretion in determining park needs, because every community is different and may have various types of recreation facilities that meet the demand even if they do not have the acreage.

With consideration of the NPRA standard, the number of new residents in the subarea under the action alternatives, and assuming that some existing facilities in the subarea and in surrounding areas are currently meeting neighborhood park needs, there likely would be an additional demand for one new neighborhood park in twenty years (by 2035) and additional neighborhood parks at build-out (see discussion below) Some of this demand could continue to be served by neighborhood school facilities as well as neighborhood parks in areas bordering the subarea. Most of the demand would need to be met by new parks, recreation, and open space facilities. Neighborhood parks potentially could be integrated into the redevelopment of large Neighborhood parks can vary in size. The PROS Plan defines the size of neighborhood parks as being less than 10 acres. The City prefers that these parks be at least three acres in size, but recognizes that neighborhood parks smaller than three acres can sometimes serve special purposes.

parcels and by adding property to existing parks and open space areas.

The City of Shoreline's amenities-driven approach to meeting the LOS neighborhood parks includes inclusion of larger community and urban park development with neighborhood park amenities and school property to meet need. Playfields, play equipment, recreation courts, and other facilities at schools are important to meeting the LOS. In the future, the use of schools sites such as Paramount School Park might change. The School District may need to use the site for school/educational purposes again with growth in the subarea. If this occurs, it will be important to coordinate with the School District to continue to provide public access to the school site and facilities to serve the neighborhood's needs.

It is envisioned that with redevelopment of the subarea, implementation of urban plazas, pocket parks, playgrounds, trail corridors, and other open space also could serve some of the demand for neighborhood park space.



It is important to remember that the other level of service standard referenced is for neighborhood parks to serve an area within one-half mile. As such, parks could be developed at the periphery of the subarea in the future that would serve residents' needs. If other types of parks, recreation, and open space facilities are provided as part of redevelopment, the level of service could be sufficient for an urban neighborhood. This assumes that existing neighborhood parks in areas near the subarea would be able to serve some of the growing population. In some cases, these existing neighborhood parks may need new facilities such as play equipment or other elements to improve their recreation capacity for use by the surrounding residents.

Smaller (one-half acre or less) dispersed urban park, open space and plazas which act as public gathering spaces, , could also help to serve the demand in the subarea if incorporated into redevelopment projects.

The required updates to the PROS Plan (every six years) create a way for the City to continue to monitor the need for parks as the neighborhood grows, and to seek funding to maintain and acquire property, and develop new neighborhood park facilities in the subarea to serve the growing population's needs. One of the important objectives of developing a subarea plan is to identify these key areas of need, so that the City and its partners can begin to proactively plan to serve these in the near term. Recognizing that future property values would likely increase in the subarea , it may be advantageous to seek property for parks and open space use in the near term. This would require examination of potential funding options, such as dedications, grants, bond levies, or other means. The current capital budget does not including funding for any near term acquisition.

Priority habitat areas such as at Twin Ponds Park are protected by local, state, and federal regulations. Areas of urban forest are more vulnerable to potential impacts associated with redevelopment in the subarea. The City's adopted critical areas ordinance calls for preservation of groups of mature trees, planting of native landscaping, and other provisions. DOE regulations related to surface water management also recognize preservation of natural areas as a best practice. Redevelopment projects in the subarea will be required to comply with these regulations as applicable.

# Demand for Other Human Services/Community Support Facilities

Under either of the action alternatives, the growing population of the subarea also will generate demand for a wide range of other human services and community support facilities, such as community center facilities, community meeting and classroom facilities, recreation center facilities, etc. Refer to the previous Schools analysis in this section for more information.

# Alternative 2 – Connecting Corridors at Build-Out

It is estimated that implementation of Alternative 2—Connecting Corridors would result a total population of 34,643 with 14,435 total households at full build-out. This growth level would not be expected to be reached for 60 to 94 years or more (by 2075-2109 or beyond). Alternative 2 would also result in a population of approximately 11,747 employees at build-out, who may have a need for parks and recreation facilities at some point during the



day or evening (although there likely would be some overlap between residents/employees living and working in the subarea).

The projected population under Alternative 2 would create a baseline demand for approximately six to seven total neighborhood parks in the subarea. (This would be approximately two to four new neighborhood parks given existing parks in the subarea.) This assumes that school facilities would continue to serve part of the demand, and given the lack of available land and space for new neighborhood parks, some of the demand potentially could be served by smaller neighborhood parks (at least 3 acres in size) and dispersed urban park, open space and plaza/public gathering spaces created as part of redevelopment sites or by adding or enhancing park amenities within existing parks and by expanding park and open spaces (adding adjacent property through acquisition or dedication by willing sellers/donors.

# Alternative 3—Compact Community

Under the Alternative 3—Compact Community, the total population would be expected to rise to 36,647 people living in 15,270 households and 9,639 employees in the subarea. This growth level would not be expected to be reached for 63 to 98 years or more (by 2078-2113 or beyond).

Similarly to Alternative 2, the projected population under Alternative 3 would create a baseline demand for approximately six to seven total neighborhood parks in the subarea. (This would be approximately two to four new neighborhood parks given existing parks in the subarea.) As mentioned previously, it is assumed school facilities would continue to serve part of the demand, and given the lack of available land and space for new neighborhood parks, some of the demand potentially could be served by smaller-sized neighborhood parks and dispersed miniparks, and urban plazas/public gathering spaces created as part of redevelopment sites. Adding to/enhancing amenities within existing parks and expanding existing parks and open spaces through dedications or acquisition (by willing donors/sellers) can also help to address the demand for parks and recreation.

# Table 3.5-1 Estimated Demand for Parks

Time	Alt. 3	Alt. 2	Alt. 1
Frame	Compact	Connecting	No Action
	Community	Corridors	
Twenty	One New	One New	Improvements
Years/	Neighborhood	Neighborhood	Implemented
2035	Park	Park	from the PROS
2055			Plan
	Two to Four	Two to Four	Not Analyzed
Build-	New	New	
Out	Neighborhood	Neighborhood	
Out	Parks or a	Parks or a	
	Combination of	Combination	
	Facilities to	of Facilities to	
	Meet the	Meet the	
	Demand	Demand	

# **3.5.3 Mitigation Measures**

A number of park-related projects are currently in the PROS Plan recommendations list and the City's Capital Improvements Plan. The PROS Plan has short-term, mid-term, and long-term



recommendations along with community goals during the current planning period. In the future, these recommendations will be reviewed annually and appropriately considered during budgeting of the Capital Improvement Plan.

The PROS Plan likely will receive updates in 2017, 2023 and 2029. At those times, the City will reassess the demands and needs and may modify recommendations based on budgeting, available funding, or environmental changes. With those updates, the City should carefully evaluate the level of recent and pending changes in the station subarea and make recommendations for additional park, recreation, and open space facilities accordingly.

In addition to these activities that will help to ensure adequate parks, recreation, and cultural services are provided to the growing subarea, the following mitigation measures would be applicable to the two action alternatives: Alternative 2— Connecting Corridors and Alternative 3—Compact Community.

- The proposed subarea plan policies related to parks, recreation, and open space should be adopted to support the development of needed facilities for future residents in the subarea. The policies call for:
  - Considering potential acquisition of sites that are illsuited for redevelopment due to high water table or other site specific challenges for new public open space or stormwater function. Where feasible, acquire land adjacent to existing parks and open spaces.
  - Explore a park impact fee or fee in-lieu of dedication program for acquisition and maintenance of new parks or open space and additional improvements to existing parks. Funds from this program would allow the City to

purchase property and develop parks, recreation, and open space facilities over time to serve the growing neighborhood.

- Proposed development regulations for the light rail station area should be adopted to require and/or encourage the provision of public space and recreation facilities with redevelopment projects, as part of Development Agreements (Chapter 20.30.355) and site design (Chapter 20.50.240). New developments should be required to provide some level of park and open space use for residents, and the City should continually evaluate the best possible locations for creating new neighborhood parks as the subarea grows.
- Explore options for the next update to the PROS Plan to include strategies to address the projected population growth by exploring ways to increase land around adjacent parks, set standards for size and park development for new parks in the subarea and identify needed park and recreation facilities/amenities for future development negotiations.
- The City would continue to monitor parks, recreation, and open space needs in the subarea and update the PROS plan in the future to address these needs.
- City policies and Code regulations related to natural areas and critical areas will be required of redevelopment projects in the subarea as applicable.



# **The Green Network**

Implementation of a green network of trails, sidewalks, bike lanes and other facilities in green streets, parks, and open spaces is envisioned for the subarea under either of the two action alternatives. The green network would be implemented over time as redevelopment occurs in the subarea. The network would also include stream corridors, wetlands, and other natural areas.

Improvements in the green network would enhance bicycle and pedestrian accessibility and safety and provide connectivity to and from the light rail station, as well as between homes, parks, school, and other community destinations in the subarea.

With stormwater management, green infrastructure/low impact development systems, stream corridor enhancement, and protection of wildlife habitat, the green network would provide a variety of environmental benefits.

The map on the next page, **Figure 3.5-6** illustrates a conceptual vision for the green network, and photos on page 3-190 show elements envisioned for the network.

# **3.5.4 Significant Unavoidable Adverse** Impacts

Under any of the alternatives, there would be an increased in demand for parks, recreation, and open space areas in the subarea. Population growth over the next twenty years under either action alternative would require development of at least one new neighborhood park, compared to the No Action Alternative, which likely could be served by existing facilities (with improvements recommended in the PROS Plan). At full build-out the demand for parks would be substantially higher under Alternatives 2 or 3 than under Alternative 1.

As changes in population occur throughout the city, the PROS Plan and the Capital Improvement Program should be updated to adjust priorities and support accommodation of the needs in the station subarea. The City also will be exploring a potential park impact fee program and/or dedication program. New redevelopment projects will be required to provide public open space and recreation amenities.

Anticipated increases in population would be expected to be manageable since they would occur over several decades. The City would have the ability to monitor growth over time and plan, prepare for, and secure resources to increase the level of parks, open space, and recreation facilities to serve the population as needed. Ongoing monitoring of opportunities to create neighborhood parks and facilities in the subarea will be critical.

Existing policies and regulations of the City of Shoreline and State of Washington, as well as those of the federal government protect wetlands, streams, and high priority habitat areas, such as Twin Ponds Park. Site development regulations administered through the City, which apply Washington State DOE stormwater requirements strictly mandate practices to preserve habitat, wildlife, and fish related to changes in water quality and quantity. The City's Critical Areas Ordinance protects stream corridors, wetlands, and their buffer areas.

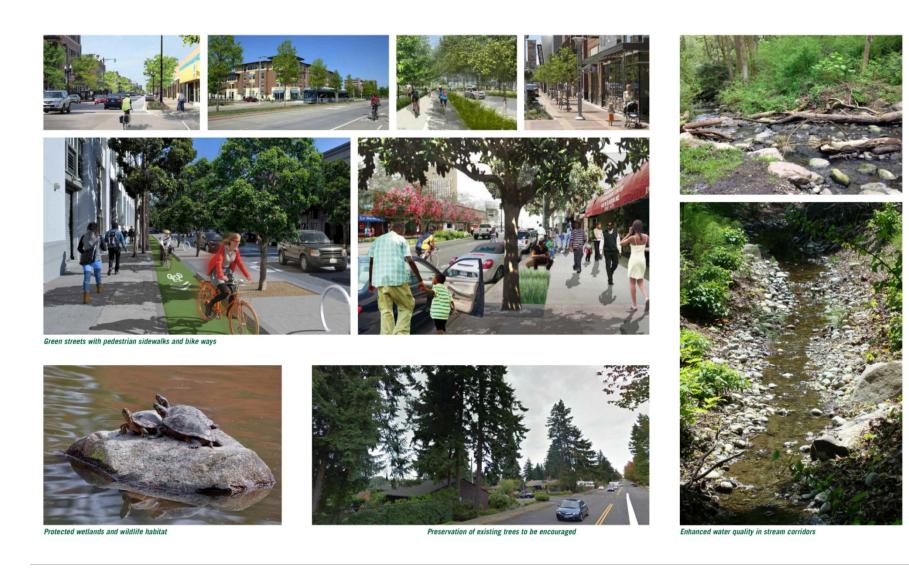
Given all of these considerations, no significant unavoidable adverse impacts would be expected to parks, recreation, open space, and sensitive natural areas and resources.





Figure 3.5-6 The Green Network Concept Map





### **Envisioned Green Network Elements**



# **3.6 Schools, Police, Fire, and Other Public Services**

This section describes the affected environment, analyzes potential impacts, and provides recommendations for mitigation measures for public school services and facilities, police, fire and emergency services, solid waste management, and other public services and facilities. Schools in the vicinity of the subarea are depicted in **Figure 3.6-1**.

This section is organized slightly differently from other sections in this chapter for better flow and readability of the subject matter. Affected Environment, Analysis of Potential Impacts, and Mitigation Measures are discussed under each public service topic area.

# **3.6.1** Public School Services and Facilities

# **Affected Environment**

Shoreline Public School District Number 412 provides kindergarten through twelfth grade (K-12) public education services for the cities of Shoreline and Lake Forest Park. The school district is known as one of the best in the region, and as such, these communities are known for having good schools and being desirable places to live for families with school children. Goals in Shoreline's Comprehensive Plan highlight the community's commitment to continue to support exceptional schools and opportunities for lifelong learning, as well as to strengthen partnerships with schools and volunteers. The school district encompasses a sixteen square mile area, bounded by Puget Sound on the west, Lake Washington to the east, the Seattle city limits to the south of 145<sup>th</sup> Street, and the King/Snohomish County line to the north. The school district operates sixteen public schools, a transportation center, and the Shoreline Center. A few of these facilities are located in proximity to the subarea (either located within the subarea boundaries or within less than a mile of these boundaries). Residents of Shoreline are served by all district schools, except Brookside Elementary School and Lake Forest Park Elementary School.

The school district operates seven elementary schools, two middle schools, two high schools, the Shoreline Center (see more detail, next page), a public preschool facility, and two additional surplus properties located within the city. In addition to these facilities, the school district maintains a transportation center (also known as the bus barn) located adjacent to the Ridgecrest Elementary School site, and a warehouse with a central kitchen located adjacent to Hamlin Park, just northeast of the study area. The schools that serve the subarea, as well as the overall district are discussed later in this section.

# **Public Schools**

Public school facilities are listed in **Table 3.6-1.** It should be noted that while this environmental analysis focuses on public services and facilities, there are several private schools located in Shoreline that also provide education services to the population.

The currently mapped school attendance areas directly affected by the subarea are Parkwood, Briarcrest, and Ridgecrest. Parkwood Elementary, Briarcrest Elementary, and Ridgecrest



Elementary are the designated elementary schools for the subarea. Attendance at middle schools and high schools is determined by where the student resides (either east or west of Interstate 5). Students in the subarea east of Interstate 5 currently attend Kellogg Middle School and Shorecrest High School. Students in the subarea west of Interstate 5 currently attend Einstein Middle School and Shorewood High School.

For the 2012-2013 school year, district enrollment was counted at 8,714 students. Given that there are an estimated 26,600 households in the district (combining households in Shoreline and Lake Forest Park), the estimated ratio of students per household is .33 students/household. It should also be noted that of the total enrollment in schools, approximately 81 percent are generated by Shoreline households and 19 percent by Lake Forest Park households. **Table 3.6-2** shows the approximate breakdown of enrollment per high school, middle school, and elementary school.

#### **Recently Improved and Planned School District Facilities**

The school district substantially renovated its two high schools, Shorecrest and Shorewood, between 2011 and 2014 to meet standards of the Washington Sustainable Schools Protocol. In February of 2014, a special election approved replacement levies for educational programs, maintenance, and operations, and capital for technology improvements and support.

The programs, maintenance, and operations levy provides the district with approximately 26 percent of its general fund operating revenue. It pays for the basic education programs not supported by state and federal funding, including nurses, family advocates, librarians, and instructional materials. It helps support

special education, highly capable, remedial and vocational education programs, building maintenance and utilities, and transportation. Funds are also used to support extra-curricular student activities, including music, drama, and athletics.

The technology improvements and support levy is used to meet the district's ongoing technology needs for capital improvements. This includes student computers and expanded online curriculum for classroom use, instructional specialists, equipment upgrade and replacement (including lab and library computers, printers, classroom audio-visual equipment), professional development and training, server and network replacements and upgrades, administrative software systems, online and subscription resources, and virus and firewall protection.

In 2012, the school district concluded a three-year bond for construction projects. Those improvements included construction of the new Shorewood High School and Shorecrest High School, mechanical system, field and site upgrades, fire and security upgrades, traffic improvements, electronic and communications improvements, upgrades to finishes, and central kitchen upgrades.

The district anticipates that replacement levies would allow for continued stability of school tax collections for the next four years. The proposed levy amounts are unchanged from the expiring 2010 Capital Levy for Technology Improvements and Support.

In recent years, a number of elementary school sites have been converted to other uses (Aldercrest Annex and Cedarbrook, North City, and Sunset elementary school sites). The school district



intends to retain these properties in case they are needed for future school use. Although the school district currently has no plans for building new schools, it is recognized that additional schools and facilities may be needed in the future to serve growth in the subarea.

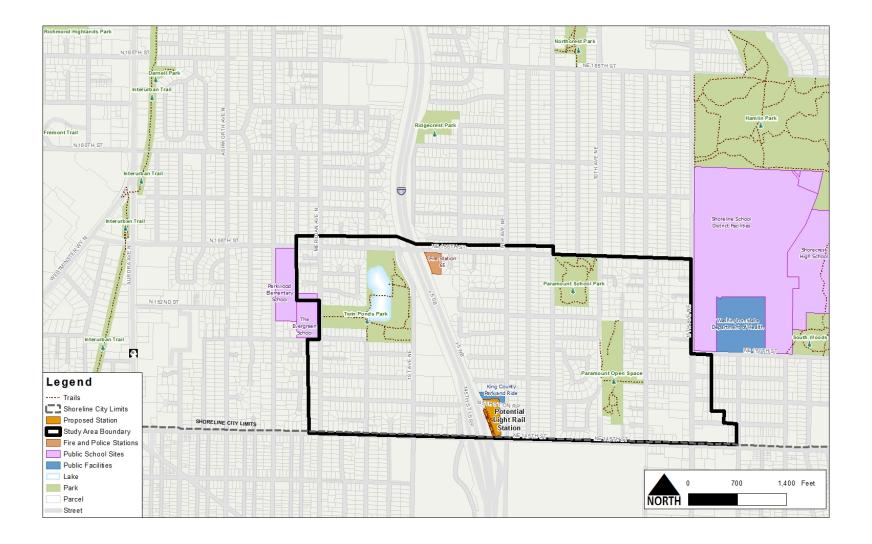




Table 3.6-1					
Public Schools and School District Facilities					
	School Name	Grades	2013	Location	
		Served	Enrollment		
Preschool/Daycare	Centers <sup>1</sup>				
	Shoreline Children's Center	N/A		1900 N 170 <sup>th</sup> Street	
		Grades	2013		
	School Name	Served	Enrollment	Location	
Elementary Schools					
	Echo Lake Elementary	К-б	481	19345 Wallingford Avenue I	
	Meridian Park Elementary	К-б	450	17077 Meridian Avenue N	
	Ridgecrest Elementary	К-6	475	16516 10 <sup>th</sup> Avenue NE	
	Briarcrest Elementary	K-6	715	2715 NE 158 <sup>th</sup> Street	
	Brookside Elementary	K-6	513	17447 37 <sup>th</sup> Avenue NE	
	Highland Terrace Elementary	K-6	433	100 N 160 <sup>th</sup> Street	
	Parkwood Elementary*	K-6	444	1815 N 155 <sup>th</sup> Street	
	Syre Elementary	K-6	523	19545 12 <sup>th</sup> Avenue NW	
Middle Schools					
	Einstein Middle School	7-8	700	19343 3 <sup>rd</sup> Avenue NW	
	Kellogg Middle School*	7-8	625	16045 25 <sup>th</sup> Avenue NE	
High Schools					
	Shorecrest High School*	9-12	1,500	15343 25 <sup>th</sup> Avenue NE	
	Shorewood High School	9-12	1,600	17300 Fremont Avenue N	

#### Figure 3.6-1 Public and Community Facilities in the Vicinity of the Subarea



### Table 3.6-1 Public Schools and School District Facilities, Continued

#### **Other Facilities**

Cascade (Alternative Learning	K-8	145	17077 Meridian Avenue N.
Choice School)			
The Shoreline Center			18560 1 <sup>st</sup> Avenue NE
Home Education Exchange			816 NE 190 <sup>th</sup> Street
Transportation Center			124 NE 165 <sup>th</sup> Street
Warehouse and Central Kitchen			2003 NE 160 <sup>th</sup> Street

Notes:

- \* These facilities are located in proximity to the subarea (either within or nearby) and serve existing subarea residents.
- 1 This school is publicly operated by the Shoreline School District. There are several additional privately operated preschools and daycare centers within and in proximity to the subarea including the North City/Shoreline Cooperative Preschool, which is located in the subarea.

## Table 3.6-2 Enrollment by School Level—Shoreline School District (2012-2013 School Year)

School Level	Number of Students	Percentage of Total
Elementary School	4,289	49.22%
Middle School	1,325	15.21%
High School	3,100	35.57%
Total Number of Students	8,714	100%



# **Analysis of Potential Impacts**

Regardless of growth alternatives analyzed, school enrollment trends are affected by a variety of factors, including population growth, housing availability, economic conditions, and prevailing birth rates. However, it is generally accepted that growth in population equates to a greater demand for educational services.

While most of this demand would be for public school services provided by Shoreline School District, not all the projected students would attend public schools; some would attend private schools or may be home-schooled. In addition to increased student enrollment, population increases would create a higher demand for other types of public school services, such as preschool and extracurricular activities.

It is also important to consider the potential influence of anticipated housing types on school enrollment projections. There would be a greater diversity of housing types in the station subarea, including a variety of multi-family and single family attached residences. Traditionally, families with higher ratios of students per household have tended to live in single family residences in the region. However, this trend has been changing in recent years, with more fluctuation in household sizes. More people are choosing to live in smaller-sized residences including multi-family homes. At the same time, household sizes overall in the US have seen a decline over the last ten years.

The factor of .33 students per household being applied in the subarea in this DEIS analysis represents an overall average for all households in Shoreline. While this factor could potentially be less in the subarea with future build-out given the trends described above, it is being applied to this analysis to plan for the

greatest potential. Since Shoreline is a desirable community for families and the school district, the community could tend to attract more families as a result of providing new and varied housing opportunities.

# Alternative 1 - No-Action

Under Alternative 1—No Action, there would be no changes to zoning, but ongoing population growth and new housing construction in the subarea would place additional demands on school services and facilities. The population of the subarea would be anticipated to increase to 11,040 by 2035 under the No Action Alternative. This compares to a current population of 8,321 people, indicating a population growth of 2,719 people without any changes to zoning. Today there are 3,467 households in the subarea, and these would increase to 4,600 by 2035 under the No Action Alternative, increasing the number of households by 1,133. For Alternative 1, it is estimated that of 374 new students generated over the period from 2014 to 2035, there would be:

- 184 elementary school students
- 57 middle school students
- 133 high school students.

In comparing these projected levels to current enrollment levels in existing schools as a portion of the total enrollment generated citywide and by Lake Forest Park households, it would appear that these students could be accommodated within the existing school facilities; however, it should be noted that the School District is continually monitoring facilities needs and provision of the ongoing level of service is contingent upon funding levels keeping pace with growth.



# *The Next Twenty Years (Up to 2035) Under Either Action Alternative*

Under either of the two action alternatives, there would be an increased demand for schools and school facilities over the next twenty years. It is estimated that there would be the following total student populations in the subarea per school level:

- 770 to 946 elementary students
- 238 to 292 middle school students
- 556 to 684 high school students

The Shoreline School District will review these numbers as part of their ongoing planning for school facilities and begin to determine how to address the population growth in the coming years.

## Alternative 2 – Connecting Corridors

Under the Alternative 2—Connecting Corridors, population and housing growth would place increased demands on the school district, creating the need for additional facilities and employees. This increased demand would be higher than under Alternative 1, but less than Alternative 3. The total population would be expected to increase to 34,643 people living in 14,435 households under Alternative 2—Connecting Corridors. This is 26,322 more people and 10,968 more households than under today's levels. Using the .33 students/household factor, approximately 3,619 students would be generated by the anticipated growth. Applying the proportional factors per school level based on today's demographics, this would equate to the following estimated student population:

- 1,781 elementary school students
- 550 middle school students
- 1,287 high school students.

In addition to increased student enrollment, Alternative 2 would create a higher demand for other types of public school services, such as preschool and extracurricular activities than under Alternative 1 and similar to Alternative 3.

Full build-out under Alternative 2 would occur gradually over many decades and would not be expected to be reached for 60 to 94 years or more (by 2075 to 2109 or beyond). This estimated pace of growth is based on market factors, property characteristics, and current population growth trends in Shoreline and the region.

The projected student populations at the elementary, middle, and high school levels due to increased population in the subarea under Alternative 2—Connecting Corridors at full build-out would require the need for additional schools and supporting facilities, as well as staff, facility, and ancillary services related to education. Because projected build-out would be expected to occur slowly, over the course of many decades, the School District would be able to monitor growth, plan for, and procure resources for additional facilities and services based on growth trends over the course of many years.

# Alternative 3—Compact Community

Under the Alternative 3—Compact Community, the total population would be expected to rise to 36,647 people living in 15,270 households under Alternative 3—Compact Community. This is 28,326 more people and 11,803 more households than under today's levels.

Using a factor of .33 students per household based on current enrollment in the district, approximately 5,039 students would be



generated by the anticipated growth. While it is not known exactly how this student population would be assigned to various levels in the school system, based on the breakdown in current enrollment (Table 3.6-2), assumptions can be made as to the proportion of potential students per school level. This is an estimation only, as future demographics may be different from current demographics.

Applying the proportional factors per school level based on today's demographics, this would equate the following student population at build-out (based on current attendance at each school level):

- 2,480 elementary school students
- 766 middle school students
- 1,792 high school students.

In addition to increased student enrollment, Alternative 3 would create a higher demand for other types of public school services, such as preschool and extracurricular activities, than under the other alternatives. Full build-out under Alternative 3 would not be anticipated to occur by 2035. Based on market factors, property characteristics, and current population growth trends in Shoreline and the region, this level of growth would be anticipated to occur over many decades, not reaching build-out levels for 63 to 98 years or more (or by 2078 to 2113 and beyond).

The projected student populations at the elementary, middle, and high school levels due to increased population in the subarea under Alternative 3—Compact Community would require the need for additional schools and supporting facilities, as well as staff, facility, and ancillary services related to education. Because projected build-out would be expected to occur slowly, over the course of many decades, the School District would be able to monitor growth, plan for, and procure resources for additional facilities and services based on growth trends over the course of many years.

# **Mitigation Measures**

# **Background Considerations**

In February 2014, two replacement levies were approved to extend financial support for educational programs, maintenance and operations, and technology improvements. These levies would need to be renewed in the future in order for the district to continue to provide a level of service consistent with current conditions. The voting population has been supportive of school district levies, and it is anticipated (but not certain) that as more households with students move into the district, voters would continue to be supportive of future levies.

Mitigation measures that would address the potential impacts described above follow.

- The school district will continue to monitor growth levels within its service area, including the station subarea and document trends in student enrollment in order to plan, prepare, and secure resources for the addition of facilities and services to support the growth.
- The school district retains properties for future uses that may be needed. The school district facility west of Shorecrest High school currently being used as a warehouse and central kitchen should be retained for future potential school use to serve the growth projected for the subarea.



- For classroom expansion needed on an ongoing basis, the school district owns several portables for siting at impacted schools. If necessary, the school district could purchase or lease more, although this is not a preferred long-term operation scenario.
- The district also has the ability to alter or shift special program assignments to available space to free up space for core programs: gifted programs, special education, arts, activities, and others.
- Boundary adjustments could occur to reallocate the area from which individual schools draw attendance. As completed recently with the high schools, expansion of affected schools, if feasible, without eliminating required playfields or parking, could be a planned improvement to accommodate increases in demand.
- The City of Shoreline does not currently charge impact fees to new development applications for school facilities. The City should coordinate with the Shoreline School District to monitor and determine the potential need for an impact fee program over time. For example, King County charges school impact fees to development projects in unincorporated areas. Impact fees are adopted annually by ordinance following a thorough review by the School Technical Review Committee and the King County Council of the each district's capital facility plan and enrollment projections. Fees vary per school district and are assessed and collected for every new residential dwelling unit. Low-income housing, senior

housing, and community residential facilities are exempt from the fee program.

# Significant Unavoidable Adverse Impacts

Under either of the action alternatives, population growth and increased numbers of households would create additional demand for public school services and facilities. The anticipated increases in student population would be expected to manageable since they would occur over several decades. The School District would have the ability to monitor growth in enrollment over time and plan, prepare for, and secure resources to increase the level of services and facilities to serve additional students as needed. Advancements in technology, educational programs, and teaching methods may also play a factor in accommodating the anticipated increases in demand on the public school system.

# **3.6.2** Police, Fire, and Emergency Services

Shoreline is known region-wide for the effectiveness of its police force and for programs that encourage troubled people to pursue positive activities, and provide alternative treatment for nonviolent and non-habitual offenders. Police protection in the subarea is provided by the Shoreline Police Department, King County Sheriff's Office, and Washington State Patrol. The Shoreline Fire Department provides fire protection and emergency medical services to the City of Shoreline. Servicing the community with fire suppression, prevention techniques, public outreach, and plan review and inspection services, they are committed to improving life safety and protection in Shoreline.



# **Affected Environment**

## **Police Protection**

The Police Station was built in 1956 and purchased by the City shortly after incorporation in 1995. The Station is located in the subarea at 1206 N 185th Street. The building is 5,481 square feet, and is constructed of unreinforced masonry that has not been retrofitted to earthquake standards. In 2012, the City initiated a feasibility study to analyze potential locations of a new facility. This need was identified during the City's 2009 Hazard Mitigation Planning effort.

As of 2014, there are 52 full-time employees assigned to the Shoreline Police Department. A majority of the officers are in the patrol division; additionally, there is a traffic unit, burglarylarceny detectives, special emphasis team (undercover) detectives, school resource officer, community services officer, professional support staff, sergeants, two captains and a police chief. In 2012, the average response time to emergency calls for service for Shoreline Police was 3.39 minutes compared to the national standard of 5 minutes. Shoreline partners with the King County Sheriff's Office for specialized services, homicide/robbery investigations, SWAT, K9, air support, bomb technicians, and other services.

Police services are provided to Shoreline through a year-to-year "City Model" contract with King County in three major areas:

- City Services: staff is assigned to and works within the city. In 2012, there were 52 FTEs dedicated to the city.
- Regional Services: staff is assigned within the King County Sheriff's Office, and deployed to the city on an as-needed

basis (e.g., criminal investigations and special response teams).

• Communications: The City contracts with King County for dispatch services through the King County 911 Communications Center.

There are no City-managed jail cells located within the city. The Shoreline Police maintain two holding cells at the Police Station on N 185th Street to detain suspects until they can be transferred to the King or Snohomish County jail facilities.

**Special Emphasis Team (SET)**—The Shoreline Police Department Special Emphasis Team (SET) consists of one sergeant and four detectives. All four of the detectives are solely dedicated to the day to day operations of the SET Unit.

The responsibilities of the unit vary and are flexible to address identified crime trends in the city. This unit typically works in a plain clothes (undercover) capacity and drives unmarked cars to enhance surveillance abilities. The SET Unit has received extensive training in surveillance techniques, case development, interviewing techniques, and vice and narcotic investigations.

The Shoreline SET Unit works closely with other neighboring police agencies, local and state federal task forces, and the King County Sheriff's Office on a regular basis. SET detectives follow up on all narcotics and vice related complaints and arrests in Shoreline, and all Narcotic Activity Reports (NARs) generated from citizens.



The SET Unit is also actively involved with the Citizens Academies, Community Landlord Tenant Training, community meetings, and problem solving projects.

**Criminal Investigations Unit**—The Criminal Investigations Unit is comprised of one sergeant and four detectives. Three of the detectives are responsible for investigation and follow-up on most felony crimes committed in the city, with the exception of homicide/special assault and major accident investigations, which are handled by the King County Sheriff's Office Major Crimes Unit.

The fourth detective works exclusively on fraud and forgery investigations originating in Shoreline. This detective is also assigned on a part-time basis to a Secret Service Task Force. His participation in this task force brings extra support to the City of Shoreline for any complicated investigations that include counterfeiting of US currency, internet and computer investigations, and money laundering cases. Additionally, this detective also investigates Adult Protection referrals for financial exploitation of vulnerable adults in Shoreline.

**Community Service Officer**—The Shoreline Police Department has one Community Service Officer (CSO). The CSO provides nonlaw enforcement services to the community, relieving police officers of some tasks that do not require police legal authority.

The CSO's main function is that of community outreach. They are familiar with the various social services in the area and work closely with these agencies to provide needed services to citizens. They also work closely with the courts, domestic violence victims, and the Adult Protective Services concerning Shoreline's adult vulnerable population.

Active Shooter and Patrol (ASAP) Teams--In the last decade, law enforcement on a national level has experienced a spike in violent criminal behavior that has targeted vulnerable locations, such as schools, shopping centers, and movie theaters. The Shoreline Police Department has worked hard to develop and implement appropriate tactics by drawing on the expertise of multiple sources. They have designed a program that can be adjusted as needed to fit a wide range of scenarios. One of the highest priorities is partnership with the school district. The Shoreline Police Department strives to provide a safe environment for students.

Shoreline District Court (Non-City-Managed)—The Shoreline District Court, located at 18050 Meridian Avenue N, is supportive of police services provided to the City through an interlocal agreement with King County. The District Court provides Citymanaged court services for the prosecution of criminal offenses committed within the incorporated city limits. The District Court serves several other jurisdictions as well.

#### **Police Level of Service**

The Shoreline Police department strives to maintain the level of service of 1 patrol officer per 1,000 residents. In 2012 level of service was 0.99 commissioned officers per 1,000 Shoreline residents. The total number of commissioned officers includes full-time dedicated officers, plus officers who work in supervisory or other non-patrol related positions, as well as officers that work in specialty units that are on-call for the city. Although the number of Shoreline's dedicated officers may stay the same from



year to year, the number of officers that respond to calls for service can change with the city's needs. Therefore, the number of total commissioned officers can increase or decrease depending on Shoreline's service needs from year to year.

#### **Planned Police Facilities**

The Police Department recently closed two storefront neighborhood centers that were staffed by community volunteers. Closing those facilities is associated with future plans to consolidate services into one facility. Scheduled for early 2016, the Police Department will close their precinct at N 185<sup>th</sup> Street and relocate to the Civic Center on the first floor of City Hall. Long-term plans include constructing a critical and essential infrastructure building for emergency related equipment, generators, and emergency communication systems.

Requests have been made for patrol officers to have available electric motorcycles that are environmentally friendly and quieter, which is beneficial when patrolling urban areas and parking structures. The department currently plans to maintain an approximate ratio of .85 commissioned officers per 1,000 residents (population) based on the City's adopted level of service standard/policy. The department reports it is currently operating at a ratio of approximately 1 commissioned officer per 1,000 residents.

## Fire and Emergency Services

The Shoreline Fire Department is a non-City-managed service providing Fire Protection and Medical Emergency Services across an area slightly larger than the incorporated boundaries of the City of Shoreline (serving the full current population of Shoreline plus some additional). The Fire Department provides fire suppression services City of Shoreline residents as well as to Point Wells in Snohomish County on a contractual basis. The Shoreline Fire Department maintains five stations located at 17525 Aurora Avenue N (Station 61), 719 N 185th Street (Station 64), 1851 NW 195th Street (Station 62-Children's Safety Center), 145 NE 155th Street (Station 65), and 1410 NE 180th Street (Station 63). The department also maintains five pumpers, three advanced life support units, three basic life support units, and one ladder truck. Station 65 is located in the subarea, and Stations 61, 63, and 64 are adjacent to or within close proximity to the subarea.

The Fire Department currently employs twenty-nine full-time firefighter/paramedics who provide professional 24-hour advanced life support services. Station 61 has six command and support staff and no operations officers. Station 63 has a minimum of four staff including one officer, two fire fighters, and one medical service officer. Station 64 provides a minimum staff of eight including one officer and two fire fighters on an engine, two fire fighters on an aid car, two paramedics, and a Battalion Chief. Station 65 has a minimum of three staff including one officer and two fire fighters. In addition, Shoreline Medic One staffs one full-time medic unit serving Northshore, Lake Forest Park, and Bothell.

Emergency medical services make up the largest number of 911responses. Shoreline Fire Department provides two levels of medical care: Basic Life Support and Advanced Life Support. Firefighter/EMT's (Emergency Medical Technicians) and Firefighter/Paramedics provide a total team approach and provide distinct yet complementary care.



**City of Shoreline Emergency Operations Center (EOC)**—The City assumes responsibility of emergency management for their jurisdiction. The City has established its Emergency Operations Center at the Shoreline Fire Headquarters (Station 61) through a Memorandum of Understanding (MOU) signed by the City Manager and Fire Chief. The City supports the equipment needed to operate from the Fire Department's community room. The need for a more permanent EOC was also discussed in the 2009 Hazard Mitigation Planning process. This could potentially be included in the planning for a new police facility, and is considered a "critical facility" during emergencies.

### Fire and Emergency Level of Service

The Shoreline Fire department determines their level of service by call volumes defining staffing and station demands and needs. The type of calls and location of the call relates to reliability or availability of the first due station to provide coverage. The department is operating at a very high level of service with about one call/incident annually for every 8 to 10 people. A typical level of service standard is approximately one call for every 30 people.

## **Planned Fire Facilities**

The Shoreline Fire Department recently completed construction of two new neighborhood fire stations and a training/support services/administrative facility. Future projects are anticipated with expected population growth but specific projects are not currently programmed. Station 63 is most likely to receive improvements since it is one of the older facilities and is designated as the first due station associated with the subarea. Improvements to this facility would provide an increase in response and allow for housing of appropriate equipment and response vehicles.

# **Analysis of Potential Impacts**

## Alternative 1—No-Action

Under the Alternative 1—No Action, population growth and construction of new housing and businesses in the study would be less than under the action alternatives, but there would still be some additional demands for police, fire, and emergency services. Under the No-Action Alternative, the City's population growth would impact fire protection with an estimated total population in the subarea of 11,040, an increase of 2,719 people over the current population of 8,321.

For police protection, Alternative 1—No-Action would increase demand for police, fire, and emergency services. Related to police services, if Shoreline Police maintained the level of policy standard ratio of .85 commissioned officers per 1,000 residents, the additional population would require approximately 2.3 additional commissioned police officers. Additional impacts may be incurred depending on the involvement and future continued support by the King County Sheriff's Department.

Redevelopment under the No-Action population increase is less likely to include advanced technology to support emergency service and security systems in connection with the dispatch service.

For fire and emergency services, the population increase would equate to an additional 272 to 340 calls/incidents annually. With the fire and emergency services already under a substantial burden to serve the current population and responding to three



times more calls than typical service levels, any increases in population would require additional services and facilities.

# *The Next Twenty Years (Up to 2035) Under Either Action Alternative*

Under any of the action alternatives, the projected 2035 population of new residents would be 3,054 to 5,655 (in 1,273 to 2,356 households), above the current number of residents and households in the subarea. This would create a demand for approximately 2.6 to 4.8 new commissioned police officers by 2035 (over today's levels) to address arising needs such as increased crimes and offenses and to provide added patrol and protection services.

Fire and emergency service providers would need to increase staffing, equipment, and facilities to handle approximately 305 to 707 new calls annually in the subarea by 2035.

## Alternative 2—Connecting Corridors

For the level of population growth projection expected under Alternative 2—Connecting Corridors, at full build-out there would be a much higher demand for fire protection and emergency service facilities, equipment, and staff than under current conditions and under Alternative 1, and comparable to Alternative 3. Based on current incidents/calls per population, an additional 2,632 to 3,290 calls per year would be expected with the population growth of 26,322 additional people.

Full build-out of Alternative 2—Connecting Corridors would impact the Shoreline Police Department facilities and services by creating an increased demand for approximately 22 additional commissioned officers maintaining the level of service ratio of .85 commissioned officers per 1,000 residents at full build-out. This staffing increase would help to address arising needs such as increased crimes and offenses and to provide added patrol and protection services.

Given the level of existing services and facilities compared to the potential future demand, additional funding and resources would be needed to support increases in the level of service provided by police, fire, and emergency services. Modern technology incorporated into new medium to high density developments is likely to increase efficiencies within the communication, call, and dispatch services within the subarea, benefiting police, fire, and emergency services.

Because build-out would be expected to occur very gradually over several decades (60 to 94 years or more; by 2075 to 2109 or beyond), the service providers would be able to monitor growth in their activities, proactively plan for, and seek funding and resources to adjust services as needed to respond over time.

## Alternative 3—Compact Community

For the higher level of population growth projection expected under Alternative 3—Compact Community, at full build-out there would be a much higher demand for police protection as well as fire and emergency service facilities. Both the police and fire departments would require additional staff, equipment, and facilities to serve the growing population.

The total population would be expected to rise to 36,647 people living in 15,270 households under Alternative 3—Compact



#### 145th Street Station Subarea Planned Action

Community. This is 28,326 more people and 11,803 more households than under today's levels.

Full build-out under Alternative 3 would not occur by 2035. Based on market factors, property characteristics, and current population growth trends in Shoreline and the region, this level of growth would be anticipated to occur over many decades, not reaching build-out levels for 63 to 99 years or more (or by 2078 to 2113 or beyond).

There is the potential with increased population density that there could also be increases in crimes and offenses in the subarea that would need to be addressed through added police protection and patrols.

The population growth of Alternative 3—Compact Community would result in a demand for approximately 28 new commissioned police officers would be needed at full build-out (incrementally increasing over many decades up to that amount). With further evaluation and planning, the City could consider the potential for a satellite police station in the subarea over the long term future.

For fire and emergency services this population increase would result in an additional 2,833 to 3,541 calls annually at full buildout (again increasing incrementally over many decades up to that amount).

With the building heights and types proposed under Alternative 3 (as with Alternative 2), there would be a need for emergency and fire service providers to evaluate current equipment and vehicles to determine if additional resources would be needed. For

example, increased ladder height may be needed, and rescue and evacuation training needs may change.

Given the level of existing services and facilities compared to the potential future demand, additional funding and resources would be needed to support increases in the level of service provided by police, fire, and emergency services. Modern technology incorporated into new medium to high density developments is likely to increase efficiencies within the communication, call, and dispatch services within the subarea, benefiting police, fire, and emergency services.

Because build-out would be expected to occur very gradually over several decades, it is anticipated that the service providers would be able to monitor growth in their activities, proactively plan for, and seek funding and resources to adjust services as needed to respond over time.

### **Mitigation Measures**

- The demand for police protection could be reduced through requirements for security-sensitive design of buildings and Crime Prevention through Environmental Design (CPTED) principles for surrounding site areas.
- Additionally, provisions of onsite security services could reduce the need for police protection, and revenues from increased retail activity and increased property values could help offset some of the additional expenditures for providing additional officers and response to incidents.
- The Fire Department places a lot of emphasis on fire prevention tactics and community education to reduce



unintentional injuries and the loss of life and property from fire, accidents, and natural disasters by increasing public awareness.

- Implementation of advanced technology features into future development could increase response time and improve life safety in emergency situations.
- Behavioral changes through education and increased use of outreach, as well as volunteer services such as neighborhood watch programs also could help to reduce demand for some services.
- The increases in households and businesses in the subarea will result in increased tax revenue, which could help to offset some of the additional costs associated with providing increased services and the need for additional facilities related to police, fire, and emergency services.
- With further evaluation and planning, the City could consider the potential for a satellite police station in the subarea over the long term future.

### Significant Unavoidable Adverse Impacts

There would be an increase in demand on police, fire, and emergency services under any of the alternatives, but to more substantial levels under Alternative 3—Compact Community and Alternative 2—Connecting Corridors than under Alternative 1— No Action. With increased population there would likely be an increase in crime, as well as in emergency incidents that require more service from police, fire, and emergency professionals. Because the growth under any of the action alternatives would be expected to occur gradually, over many decades, department and district planning for services and facilities should be able to proactively plan for and keep pace with the growth to allocate resources (staffing, buildings, equipment, etc.). However, funding levels for fire and emergency services would need to be increased and keep pace with growth in the subarea to maintain the level of service required to respond to increased calls.

Police Protection has been able to manage an acceptable industry level of service for years and plans to continue achieving that service standard during population growth. However, increased population or other changes in the community may require alteration of specific unit development within the Police Department or may require changes in support from the King County Sheriff's department or Washington State Patrol.

Adequate funding for provision of services, as well as procurement of equipment and resources would need to be allocated over time to support population growth in the subarea. With this investment it is anticipated that potential adverse impacts would be mitigated, and there would not be significant unavoidable adverse impacts.



# **3.6.3 Solid Waste Management** Services

### **Affected Environment**

### City Contracted Services through Recology Cleanscapes

Solid waste, recycling, and food scraps and yard waste collection services in Shoreline are provided under contract with Recology Cleanscapes. Typically the solid waste and recycling services are contracted by the City of Shoreline for a period of seven years, but the contract timeframe can vary depending on the specific service and contracting agency. Residential customers receive curbside garbage collection every week. Recycling and food and yard waste collection occurs every other week. The schedule for collecting recycling is offset from the food and yard waste collection week. Recology Cleanscapes will haul bulky waste items (e.g. refrigerators, sofas, mattresses, etc.) curbside for an additional charge. After collection the solid waste is transported to the King County Recycling and Transfer Station in Shoreline. The food and yard waste is taken to Lenz Recycling Compost Facility in Stanwood, Washington. The recycling materials are transported to Recology Cleanscape's own materials recycling facility in Seattle, Washington.

### King County Solid Waste Division

A King County Recycling and Transfer Station is located at 2300 N 165<sup>th</sup> Street. This facility receives solid waste and a variety of recycling materials from the Shoreline community and surrounding cities. The Shoreline Transfer Station accepts large

appliances and fluorescent light bulbs, which aren't disposable at other area facilities. Waste consolidated at the transfer station is hauled to the Cedar Grove Regional Landfill in Maple Valley, Washington.

The King County Comprehensive Solid Waste Management Plan completed in 2013 provided an estimate of the amount of waste generated per customer (household or commercial address) and the recycling rate for communities in the county. For Shoreline, the average amount of garbage disposed per week was 23 pounds per customer. This was lower than many other communities in the county and lower than the countywide average of 25 pounds per week. Shoreline's recycling level was 57 percent, which was higher than many other communities and higher than the countywide average of 55 percent. The Shoreline community is managing solid waste in an above average manner. Also, in Shoreline and countywide, average weekly disposal amounts are trending downward, while recycling levels are increasing.

### **Analysis of Potential Impacts**

Under all the alternatives, population increase in the subarea would increase demand for solid waste, recycling, and food and yard waste collection services over the course of the time the population reaches build-out levels.

Under Alternative 1—No Action, the demand for additional solid waste services covering the need of 1,133 additional households and businesses in the subarea by 2035.

Levels of solid waste generated and correlating service demands would be similar under either of the two action alternatives over



the next twenty years (up to 2035), given the expected pace of growth.

Under Alternative 2—Connecting Corridors, an additional 10,968 households, as well as various businesses and other land uses, also could develop at build-out and create increased demand for services in the subarea.

Under Alternative 3—Compact Community, an additional 11,803 households, as well as businesses and other land uses could develop at build-out.

**Table 3.6-3** displays estimated waste generation levels peralternative based on today's known calculations for Shoreline. Itshould be noted that these amounts are likely high given trendstoward solid waste reduction and increased levels of recycling.

# Table 3.6-3Solid Waste Generation per Alternative

Time Frame	Alt. 3 Compact Community	Alt. 2 Connecting Corridors	Alt. 1 No Action
Twenty Years/ 2035	109,020 to 133,929 pounds per week of solid waste generated	109,020 to 133,929 pounds per week of solid waste generated	105,800 pounds per week of solid waste generated
Build- Out	351,210 total pounds per week of solid waste generated	332,005 total pounds per week of solid waste generated	Not Analyzed

More landfill space may be needed to support waste management at the levels listed, particularly for Alternative 2 or 3. There would need to be intense management of solid waste levels including actions to divert waste to avoid this outcome.

### **Mitigation Measures**

As discussed previously in this section, full build-out of the action alternatives would be expected to occur gradually, over many decades into the future. As a contracted public service, the City would need to allocate additional funding to solid waste services to serve the growth in population. It is anticipated that increases in households and businesses in the subarea would result in increased tax revenue, which could help to offset some of the additional costs associated with providing increased solid waste services.

- To reduce construction related waste, the City could require development applicants to consider recycling and reuse of building materials when redeveloping sites, and as part of their application require them to explain what measures are included.
- The City may condition Planned Action applications to incorporate feasible recycling and reuse measures.
- Using solid waste, recycling, and food and yard waste collection storage and container size requirements would mitigate impacts associated with all of the alternatives.
- Currently the City of Shoreline hosts two recycling events typically in the fall and the spring. These events provide a place for homeowners to recycle materials commonly not collected at the curb. With population growth, increasing



the number of events per year could mitigate additional demand on the recycling collection vendor.

- The City or other entities involved in solid waste management could increase outreach to educate residents and businesses about the importance of waste reduction and recycling. Programs to encourage more composting, conversion of waste to energy, reuse, recycle, barter/trade, etc. could be intensified over time. These efforts could lead to behavioral shifts in the subarea that might then help offset some of the increased demand for services.
- Solid waste services are paid through fees. Additional customers would increase the revenue base for solid waste management services. In addition, the City and its contractor could manage the fee structure and potentially increase fees in the future if needed to address the additional demand for services. It is anticipated that this would be a last resort if outreach and education do not result in reduced solid waste levels.
- The City would work with King County and regional waste management entities to monitor the ongoing potential need for additional landfill space.

### Significant Unavoidable Adverse Impacts

Implementation of any of the action alternatives would increase demand for solid waste services due to increases in residential and employment population in the subarea. With additional budget allocation to contracted services supported by increased tax revenue from new households and businesses over several decades, the increased demand for services would be addressed. As such, no significant unavoidable adverse impacts would be anticipated.

# **3.6.4 Other Public Services and** Facilities

### **Affected Environment**

### City Hall/Shoreline Civic Center/City Services

The Shoreline Civic Center and City Hall are located at 17500 Midvale Ave. N. This is new facility is a 67,000 square feet, LEED Gold certified building with an expected lifespan of 50-100 years, located in the heart of Shoreline's Town Center. It offered the ability for the City to consolidate services to one location, and will further that goal to better serve the community by welcoming the new police department in the near term. City Hall currently includes the Executive, City Clerk, Attorneys, Finance, Administrative Services, Human Resources, Parks and Cultural Services, Public Works, and Planning and Community Development. City Hall has a count of 135 FTEs. The current level of service for the City calculates to approximately 2.52 employees per 1,000 residents, which is lower than most Puget Sound cities. If the City assumes additional responsibilities in the future, such as jurisdiction over utility systems, this ratio could change with more employees per 1,000 residents.

#### Historical Museum/Arts and Culture

The Shoreline Historical Museum is located north the subarea at the intersection of N 185<sup>th</sup> Street and Linden Avenue N. It is managed and operated by a non-profit organization with a



mission dedicated to preserving, recording and interpreting the heritage of the historic Shoreline area and its relationship to the Northwest region.

Various arts and cultural groups are active in the community and provide a variety of community services.

#### Libraries

The Shoreline Library is a King County District Library located north of the subarea at 345 NE 175<sup>th</sup> Street. It is a 20,000-squarefoot facility opened in 1993, replacing the 15,000-square-foot library built in 1975, and offers additional features that the recent previous facility did not include, such as two meeting rooms and two study rooms.

### Postal Buildings

United States Postal Service offices are located at Aurora Avenue N and N 145<sup>th</sup> Street as well as 17233 15<sup>th</sup> Avenue NE. These locations provide full service to the surrounding community with hours from 8:30 – 5:30 Monday through Friday, and open from 8:30 to 3:00 on Saturdays. Lobby areas are open 24 hours for PO Box access, mail drop off, and other self service features. The demand for postal services has been in general decline in the US for several years due to the reliance of the public on other communication methods such as email services and social media.

### Human and Social Services

A Washington Department of Public Health Laboratory is located in Shoreline at 1610 NE 150<sup>th</sup> Street. The location is just east of the subarea, but provides diagnostic and analytical services for the assessment and surveillance of infectious, communicable, genetic, and chronic diseases, and environmental health concerns to the surrounding community. Other types of human services provided in Shoreline include services for seniors such as the senior center and social service programs and facilities. Social and community services would include the need for community center uses, additional meeting space, and other facilities.

### **Analysis of Potential Impacts**

Population growth under all of the alternatives would increase demand for City services and other public services, but there would be the need for expanded services and facilities over time with build-out of either of the two action alternatives. Redevelopment over time would necessitate ongoing needs for new regulations, planning and development review, and capital projects, as well as City public works and maintenance personnel and other employees. Based on the additional population growth anticipated under the various action alternatives, the following increases in demand for other types of public and community services would be expected.

### Alternative 1-No Action

Under Alternative 1, there would be an estimated population increase of 2,719 people by 2035, which could generate demand for:

- 6.85 additional FTE City employees would be needed to serve this growth by 2035
- Minimal increased demand for library, museum, arts and culture, postal, and human/social services by 2035



### *The Next Twenty Years (Up to 2035) Under Either Action Alternative*

Either action alternative would add 2,886 to 5,314 more people to the subarea. This level of new population would result in:

- Demand for 7.7 to 14.25 additional FTE City employees by 2035
- 5.3 percent to 9.9 percent increase in demand for other services such as library, museum, arts and culture, postal, and human/social services by 2035

### Alternative 2—Connecting Corridors

Alternative 2 would increase population by an additional 26,322 people, which would result in:

- Demand for an additional 66.33 FTE City employees at build-out
- 17.5 percent increase in demand for library, museum, arts and culture, postal, and human/social services at build-out

### Alternative 3—Compact Community

Alternative 3 would result in addition of 28,326 people. This level of new population would result in:

- Demand for 71 additional full-time-equivalent (FTE) City employees at build-out (incrementally increasing over many decades up to that amount), applying the current ratio of 2.52 city employees per 1,000
- 440 percent increase in demand for other services such as library, museum, arts and culture, postal, and human/social services (a new library or satellite library may be needed at build-out)

### **Mitigation Measures**

All alternatives would increase population in the subarea and require additional public services, including the need for a variety of services. For all public services, it is anticipated that increases in households and businesses in the subarea would result in increased tax revenue, which could help to offset some of the additional costs associated with providing increased services and facilities to serve the growing population. Also, because growth would happen gradually over many decades, it is anticipated that the demand could be monitored, planned for, and served in a manageable way over time.

- The City may consider increases in development application review fees to cover costs associated with increased redevelopment activities in the subarea.
- The City should continue to provide outreach and communication to other public service entities listed above to make them aware of the potential for growth over time and the gradual increased demand for services that may accompany the growth.
- The City and other human/community services providers should monitor the need for additional services and facilities as growth occurs over time and properly plan for and allocate resources toward expanding and enhancing services to address increased demand.



### Significant Unavoidable Adverse Impacts

Under all alternatives, the subarea would experience population growth. Under the two action alternatives, the level of growth at full build-out would be substantially higher than under Alternative 1—No Action. The relative incremental pace of growth would be expected to be similar under any of the action alternatives, occurring gradually, over many decades. The City and service providers would have opportunities to monitor growth, update plans, and prepare for and respond appropriately with additional services to accommodate the increased demand. As such, no significant unavoidable adverse impacts would be anticipated.



# 3.7 Utilities and Energy Use

This section describes the affected environment, analyzes potential impacts, and provides recommendations for mitigation measures related to utilities, including water, wastewater, electricity, natural gas, and communications.

# **3.7.1 Affected Environment**

## 3.7.1 a Water

### Service Providers

Two water purveyors provide service in Shoreline: North City Water District and Seattle Public Utilities. Water service in the subarea is split, with Seattle Public Utilities roughly serving west of Interstate 5, and North City Water District serving roughly east of Interstate 5. A map of the water service area is provided as **Figure 3.7-1.** Note all maps are provided at the end of this section.

### Water Supply

### **Seattle Public Utilities**

The Seattle Public Utilities is the primary water purveyor in the area. In addition to the City of Shoreline, SPU services the City of Seattle, and a number of communities and wholesale water purveyors within King County and southern Snohomish County. Seattle Public Utilities current supply estimate is 172 million gallons per day (mgd). Based on Seattle Public Utilities Comprehensive Plan, SPU's source of supply is adequate for demand forecast until 2060.

Water entering the distribution system from the SPU's water sources is treated at a number of treatment facilities. Current water quality readings are adequate for the water system at various water quality sampling locations. In the future, SPU will be evaluating contract extension options for the Tolt and Cedar Water Treatment Facilities.

The planned subarea is located within the Seattle Public Utilities 590 Pressure Zone. Water is withdrawn from the Tolt supply line via a pump station at the corner of NE 145<sup>th</sup> Street and 5th Avenue N, to service the SPU portion of the study area, in conjunction with the Bitter Lake Water Reservoir.

### **North City Water District**

North City Water District along with sixteen other water utility districts purchase water wholesale from Seattle Public Utilities. In January 2012, North City Water District completed a new connection with the Seattle Public Utilities NW regional supply, which draws water from both the Tolt and Cedar River Watersheds. The Tolt Watershed acts as the main water supply for the North City Water District, with the Cedar River Watershed as a backup water source.

The Tolt River Watershed is located in the foothills of the Cascades in East King County. It supplies about 30% of the drinking water for 1.4 million people in the greater Seattle area. The Tolt Reservoir captures water and snow from the Tolt watershed.



The City of Seattle's Cedar River Municipal Watershed is managed to supply drinking water to 1.4 million people in the greater Seattle Area.

In 2013, the North City Water District entered into a new agreement with the Seattle Public Utilities to supply 3,330 gallons per minute (gpm) of water to its customers. In conjunction with the new withdrawal rate, The North City Water District conducted an analysis of water currently available to customers within their system. **Table 3.7-1** contains an analysis of their existing and projected water supply demands for the water source feeding pressure zone 515, and all other zones associated with this source.

As indicated in Table 3.7-1, under the North City Water District's current demand projections (estimated growth without the inclusion of the 145<sup>th</sup> Street Station Subarea Rezoning Option), the District would have a surplus of 882 gpm under peak demands for the year 2030. According to the North City Water

District 2011 Comprehensive Plan, the District does not currently forecast to have a deficiency in source capacity through the year 2030.

The North City Water District contains seven pressure zones. The North City Water District's portion of the subarea is located within the 590 pressure zone. The subarea is located at the southwest corner of the North City Water District's service area. This section of the system is located the furthest distance away from a source of supply, limiting water circulation within the water mains. According to the District's 2011 Comprehensive Plan, a new source of supply is being proposed within the vicinity of the subarea. The new source of supply, Supply Station #5 will create a new pressure zone for the District. The planned subarea makes up almost the entire new Pressure Zone 515. Supply Station #5 zone will withdraw water directly from the Tolt River Transmission Main without pumping. The proposed 515 pressure zone will receive water predominately from this supply station, with the existing water storage tanks as backup.

					1	
	1 MDD <sup>2</sup> FSS <sup>3</sup> Rep		FSS <sup>3</sup> Replenishment		Source (GPM)	
Year	ERUs <sup>1</sup>	(GPM)	Rate (GPM)	Required	Existing/Proposed	Surplus (Deficit)
2013	7,745	1,836	250	2,086	3,330	1,244
2016	7,977	1,891	250	2,141	3,330	1,189
2030	9,275	2,198	250	2,448	3,330	882

#### Table 3.7-1—Water Source Analysis

1. ERU = Equivalent Residential Unit is used to convert commercial units and multifamily dwellings to equivalent single family residential units for water demand forecasting purposes

2. MDD = Max Daily Demand

3. FSS = Fire Suppression Storage



### *Water Storage* Seattle Public Utilities

The Seattle Public Utility District owns and operates a number of water storage facilities within the City of Shoreline. The subarea is primarily serviced by the Bitter Lake open reservoir, which contains 21.3 million gallons of available water storage. A \$31-million project was completed in 2002 to cover the Bitter Lake and Lake Forest reservoirs, both of which serve areas within the Shoreline city limits. Seattle Public Utilities is currently in the process of replacing a number of existing surface reservoirs with underground structures. In 2020, the floating covers on Bitter Lake and Lake Forest Park Reservoirs will be evaluated for their remaining service life and possible replacement.

Modeling of the water conveyance system has verified that the Lake Forest Park reservoir is currently adequately sized for the population. No upsizing of the reservoir is projected in the near future.

### North City Water District

The North City Water District owns two reservoirs in the area. The reservoirs contain 5.7 million gallons of water collectively. The largest of the storage facilities contains 3.7 million gallons of water storage. This reservoir directly serves the pressure zone in which the subarea is located. The 2011 North City Water District's Comprehensive Plan performed an analysis on this reservoir, and determined it has adequate capacity for the 2030 forecasted demand scenario. Once the Supply Source #5 is connected into the system, and the area around the subarea is placed in its own 515 pressure zone, the water reservoirs will only act as backup water storage to this portion of the District's service area.

**Table 3.7-2** contains a summary of the water storage available to the system in millions of gallons (MG) for Equivalent Residential Units (ERU). An ERU is a unit of measure used to equate nonresidential or multi-family residential water usage to a specific number of single-family residences. For example, if a system has sufficient physical capacity to serve 100 ERU's, then that system would have sufficient capability to meet the projected needs of 100 full-time single-family residences. That same system would also be able to serve any combination of customers (residential, customers, etc.) provided the quantity of water used is equivalent to the projected needs of 100 single-family homes (100 ERUs).

In addition to the reservoirs, the North City Water District contains four source withdrawals and two booster pump stations that work in conjunction to supply water to its customers. The Tolt Booster Station 1 has a capacity of 2,000 gpm with alternating pumps, and Tolt Booster Station 2 has a capacity of 2,300 gpm with alternating pumps.

In 2013, the North City Water District installed Supply Station #4 into their network. Even without the inclusion of Proposed Supply Station #5 (proposed in 2020), the District projects to have adequate water storage capabilities for the forecasted demand of 2,448 gpm in year 2030, with the two existing booster pump stations, the new Supply Station #4, and the 3.7-million-gallon reservoir.



		Grouped		Storage		Storage			
Year	ERUs	Zone Gross Vol. (MG)	Dead Storage <sup>1</sup>	Standby Storage <sup>2,4</sup>	Fire Suppression Storage <sup>3,4</sup>	Equalizing Storage	Operational Storage	Effective Volume (MG)⁵	Surplus (Deficit) (MG) <sup>6</sup>
2016	7977	3.7	0	2.72	1.08	0.16	0	3.7	0.82
2030	9275	3.7	0	3.17	1.08	0.23	0	3.7	0.3

Table 3.7-2—Water Storage Analysis

- 1. Dead Storage includes the stored volume that is not available to all customers at a minimum design pressure. The construction and operation of the North City Pump Station will make use of the dead storage in the 3.7 MG reservoir.
- 2. Standby Storage determined by Department of Health (DOH) recommendation to provide storage for two days of the system's average day demand (ADD). DOH recommends at a minimum, 200 gallons/ERU.
- 3. Fire Suppression Storage is a volume available at a minimum pressure of 20 psi to all customers and includes the volume consisting of the highest minimum required fire flow rate and duration.
- 4. Standby and Fire Suppression Storage are consolidated (nested).
- 5. Effective Volume is the total volume of the reservoir less any dead storage.
- 6. Storage Surplus is the Effective Volume, less the larger of the Standby and Fire Suppression Storages, less the Equalizing Storage.

### Water Distribution

### **Seattle Public Utilities**

Pipe diameter ranges from 2" distribution mains to 30" transmission mains within the subarea. Within the Seattle Public Utilities region of the subarea, there are 5,000 feet of water mains less than 6" in diameter, 23,800 feet of water mains between 6" and 12", and 18,700 feet of water mains greater than 12". The majority of pipe diameters less than 6" in diameter were installed before 1960. A 24" steel water transmission main runs along NE 145<sup>th</sup> Street, from the supply pump station withdrawing water from the primary 60" Tolt supply main, runs under I-5, and continues to Greenwood Avenue N. A 24" steel main branches off at the intersection with Aurora Avenue N, and continues north to NE 185<sup>th</sup> Street. The 24" steel transmission main was installed in 1933 and relined in 1986. The 24" main is the primary transmission main feeding the Seattle Public Utilities portion of the subarea.

### North City Water District

According to the North City Water District's Comprehensive Plan, over 50% of the District's mains were installed between 1966 and 1968. The North City Water District's distribution and transmission main inventory identified approximately 10% of their network as 4" mains or less, 54% as 6" mains, 35% as 8"– 12" mains, and less than 3% as larger than 12" mains. In order to ensure adequate fire flow within the system, when a new



development is constructed, they are required to upsize all public water mains adjacent to their development to a minimum 8" diameter to provide adequate fire suppression.

In order to ensure adequate fire flow within the system, prior to starting a new development, an applicant is required to apply for a Certificate of Water Availability. Once the application is complete and the fees paid, the District will conduct a Fire Flow Analysis using a computer hydraulic model to determine the amount of flow and pressure available at the property in question. If the result of the analysis indicates there is sufficient fire flow, the Certificate of Water Availability will be issued to the property owner. If the result of the analysis indicates there is insufficient fire flow, improvements will be required.

The North City Water District's portion of the subarea contains a series of 6" diameter through 12" diameter mains, most of which are in a looped system.

### **Current Demand for Water**

Residential water demand is based on a survey generated by Seattle Public Utilities regarding wholesale water customers. The study includes the North City Water District residential demand per household. A comparison of residential water demand for the North City Water District, Seattle Public Utilities District, and Seattle's Wholesale customers is shown in **Table 3.7-3** 

For the purposes of this analysis, the average water consumption of 171 gpd per single family residential household will be used for the residential demand calculations. Commercial water use is based on Equivalent Residential Units (ERUs), with 171 gpd per ERU. For the purposes of this study, 1 ERU is equivalent to 2.4 employees.

Table 3.7-3—Water Consumption Analysis

	2008	2009	2010	2011	2012
North City					
Water	169	171	171	140	139
District					
Wholesale	179	193	164	165	172
Average	179	195	104	105	172
Seattle	140	145	145	128	130

With these demand figures, the North City Water District supplies 361,000 gallons per day of water during peak season operations to their portion of the subarea, and Seattle Public Utilities supplies 329,000 gpd to their portion of the subarea. The total demand within the subarea under current conditions is estimated to be 690,000 gpd.

### Fire Flow

According to Seattle Public Utilities (SPU), all fire hydrants were tested in their section of Shoreline in 2012. The "Modeled ADD Fire Flow in Shoreline August 30, 2012" map depicts the available fire flow in the SPU region of the city. According to the map, the subject area is within the 590 feet of elevation pressure zone. Current fire flow for the area primarily ranges from 2,000 gpm to over 4,000 gpm. Three fire hydrants located on a loop south of NE 155<sup>th</sup> Street, between Stone Avenue N, NE 153<sup>rd</sup> St, and Interlake Avenue N provide between 500 to 1,000 gpm of fire suppression flow. These streets are at the eastern limits of the



subarea, and the fire hydrants are located on a 4" main installed in 1947. In order to supply sufficient fire suppression, these mains need to be upsized.

# 3.7.1.b Wastewater

### Service Provider

The City of Shoreline is served by the Ronald Wastewater District for collection of the wastewater. The Ronald Wastewater District is a municipal utility governed by elected officials. A joint merger between the City of Shoreline and the Ronald Wastewater District is currently underway, which will make the wastewater system a City owned and operated utility.

The subarea is located within three sewage drainage basins, all of which drain via gravity systems to the King County's West Point Treatment Plant. All of the wastewater flows to the south from Ronald's wastewater system into King County's or Seattle Public Utilities systems. A map of the wastewater lines in the subarea is provided as **Figure 3.7-2** at the end of this section.

### Wastewater Treatment Facilities

Wastewater collected from the Ronald Wastewater District is treated at two separate treatment facilities; King County's West Point Treatment Plant and the City of Edmonds Treatment Plant. Roughly the southern two thirds of the City of Shoreline discharges to the King County Treatment Plant; and the northern third of the City discharges to the City of Edmonds Treatment Plant. The entire subarea is located at the south end of the City of Shoreline and drains to the King County's West Point Treatment Plant. King County's West Point Treatment Plant treats wastewater from homes and businesses in Seattle, Shoreline, North Lake Washington, North King County, and parts of South Snohomish County. The treatment plant treats 90 million gallons per day (mgd) of sewage during the dry months, and up to 440 mgd during the rainy season. The Ronald Wastewater District currently pays King County based on the number of residential customer equivalents within the District, which are tributary to the West Point Treatment Plant. There is currently no cap on the amount of wastewater the Ronald Wastewater District is allowed to discharge to the West Point Treatment Plant. Currently an estimated 3.82 mgd of wastewater is transported from the Ronald Wastewater District to the West Point Treatment Facility.

### Wastewater Collection Systems

Two primary wastewater collection systems run through the subarea. A 30" concrete main begins at the corner of NE 155<sup>th</sup> Street and I-5, and runs south paralleling the I-5 corridor. Wastewater collects from north, west, and east of this transmission main through a series of 8" to 24" mains. The 30" transmission main leaves the City's limits at the corner of NE 145<sup>th</sup> Street and I-5.

The second primary collection system runs south from NE 165<sup>th</sup> Street and 11<sup>th</sup> Avenue NE through the subarea, and out of the City limits through an easement between 9<sup>th</sup> Avenue NE and 9<sup>th</sup> Place NE, through a series of 15" and 18" concrete transmission mains.



Both transmission mains ultimately connect to the King County's West Point Treatment Plant.

### **Current Demand**

The wastewater demand for the City of Shoreline is based on a study performed by CHS Engineers, LLC for the Ronald Wastewater District's 2010 Comprehensive Plan. Residential wastewater generation is estimated at 85 gpd per person. Commercial wastewater generation is estimated at 187 gpd per Equivalent Residential Unit (ERU) with 2.4 employees per ERU. The subarea currently contains 1,421 jobs/employees, and 3,442 households. Based on these generation quantities, the average daily wastewater demand within the subarea under current conditions is estimated at 813,000 gpd.

### Wastewater Reclamation

Reclaimed wastewater is a way to reduce wastewater discharge, as well as reduce potable water demand. Treated wastewater effluent can be distributed back to the communities for nonpotable uses, such as industrial water use, landscaping, and flushing toilets. Treated wastewater is never reused for drinking purposes in the Puget Sound area.

Typically reclaimed water is transported through a network of "purple pipes". The cost of building infrastructure to move water from reclaimed water plants to customers is one of the most significant challenges to the distribution and use of reclaimed water. Legislative approval is needed for an expanded grant program to fund reclaimed wastewater treatment and transportation/distribution facilities. King County made reclaimed water available for on-site industrial processes and landscape irrigation at two wastewater treatment plants in 1997. King County's current reclaimed water program produces 284 million gallons of Class A reclaimed water per year at these two regional wastewater plants. All of the wastewater produced within the subarea is transported to the West Point Treatment Plant, which has the potential to produce up to 0.70 mgd of Class A reclaimed water from an average capacity of 133 million gallons per day.

Seattle Public Utilities performed a study on the viability and cost analysis of installing a new and much larger reclaimed water distribution system from the Brightwater Treatment Facility, which went online in 2011. The analysis examined the benefits and disadvantages of installing reclaimed "purple pipes" to facilities in North Seattle and Shoreline. The study analyzed potential commercial customers which could benefit from reclaimed water. The study identified 60 potential reclaimed water customers divided into five categories within the North Seattle and Shoreline communities:

Golf Courses	4
Cemeteries	7
Parks	19
Schools	20
Other	7
Total	60

It was estimated that the full life-cycle cost of building and operating a distribution system to deliver reclaimed water from the Brightwater Treatment Facility to potential customers in North Seattle and Shoreline would be about \$109 million. The potential benefits of this reclamation project were found to be minimal. Calculations showed that the project would reduce peak season demand from Seattle's regional water supply system by up to 0.70 mgd. By itself, this amount is too small to have a detectable positive impact on regional water supply, reliability, or environmental conditions in the Cedar River and Tolt River. The project would reduce the peak season withdrawals of selfsupplied irrigators from their own local supplies by up to 1-mgd. This might provide small improvements in habitat conditions for several streams in the area, though it would not be expected to result in significant increases in biological productivity. The project would reduce the discharge of pollutants from King County treatment plants into Puget Sound by about 0.04%.

Although the analysis determined that a purple pipe distribution system would not be cost effective to serve a large number of relatively small customers, dispersed over a large area, as areas redevelop, this type of system could become more cost effective. Other alternatives are currently being pursued to minimize wastewater discharge and reduce water consumption in the area. Currently, the two existing water reclamation facilities are the only facilities in operation. There could be the potential to introduce future water reclamation facilities within the King County wastewater system. However, this is not currently being actively pursued.

The City of Shoreline should coordinate with service providers to monitor advancements in water reclamation systems regionally on an ongoing basis in the future, and to determine opportunities to use these systems with new development/redevelopment as feasible. The potential to convert existing systems also should be evaluated with advancements in the use of this technology in the region over time.

## **3.7.1 c Electricity**

Electricity is supplied by Seattle City Light. The Seattle City Light service area includes all of the City of Seattle, portions of the cities of Burien, Tukwila, SeaTac, Shoreline, Lake Forest Park, and Renton, as well as portions of unincorporated King County.

### **Electricity Sources**

Seattle City Light obtains energy from a mix of sources. **Table 3.7-4** shows the distribution of energy sources used by Seattle City Light.

Table 3.7-4 Energy Sources Used by Seattle City Light

Generation Type	Percentage
Hydroelectric Nuclear	89.8% *
Wind	3.9%
Coal	
Landfill Gases	0.5%
Other	0.6%

\*50% from the Skagit and Pend Oreille Rivers

### **Transmission Corridor**

The transmission corridor servicing the City of Shoreline runs southeast through tracts and easements through Snohomish County until it reaches NE 185<sup>th</sup> Street, within the City of



Shoreline. At NE 185<sup>th</sup> Street, the transmission corridor turns due south and runs parallel to 8<sup>th</sup> Avenue NE. At the intersection of 8<sup>th</sup> Avenue NE and NE 145<sup>th</sup> Street, the transmission corridor exits the City of Shoreline, and after crossing NE 145<sup>th</sup> Street, enters a tract on the Jackson Park Golf Course within the city limits of Seattle.

### **Distribution Network**

Seattle City Light does not provide service area maps of their distribution network. The distribution network within the subarea is currently a mix of overhead and underground facilities. The majority of the area is serviced by overhead electricity lines, which share the space with telecommunication networks within the area. Typically transferring electricity lines from overhead to underground occurs only when either building setbacks are too tight to allow overhead lines, new developments pay for undergrounding within their development area, cities undertake capital improvement projects (CIPs), or neighborhoods agree to pay for underground a large portion of lines between NE 145<sup>th</sup> Street and NE 205<sup>th</sup> street, along Aurora Avenue N.

### **Current Demand**

Current demand projections are based on a study prepared by the US Energy Information Administration. In 2009, a nationwide survey was conducted, depicting residential energy usage for different demographics throughout the United States. According to the survey, residents in Washington used on average 5% less electricity per capita than the average for all Pacific Coast users. Based on an average 2.4 persons per household, the average household uses 31.84 million British Thermal Units (BTUs) per year. This equates to 87.23 thousand BTUs per household per day. The total residential demand currently projected within the subarea is 721 million BTUs per day.

Commercial energy demands were based on a US Department of Energy survey of various commercial, government, and institutional building usage types. **Table 3.7-5** presents a summary of the information.

# Table 3.7-5 US Department of Energy Survey on Energy DemandCommercial Sector Energy Consumption, March 2012

Building Type	Thousand BTUs/SF/Year
Health Care	345.9
Food Sales	535.5
Lodging	193.1
Office	211.7
Mercantile	223.6
Education	159
Service	151.6
Food Service	522.4
Religious	77
Public Order	221.1
Warehouse	94.3
Public Assembly	180
Vacant	33.1
Other	318.8
Average	233.36

Based on these figures, the average annual energy use for commercial developments is 233.36 thousand BTU/SF of space



per year, or 0.64 thousand BTU/SF per day. The total daily commercial energy demand, based on four office workers per 1,000-square feet is 227 million BTUs per day. The total estimated demand on the system within the subarea is 948 million BTUs per day.

## 3.7.1 e Natural Gas

Puget Sound Energy provides natural gas service to the residents of the City of Shoreline. The City maintains a franchise agreement (Ordinance #308) with Puget Sound Energy through October 31, 2017.

### Sources

Puget Sound Energy purchases natural gas from other regions and manages the distribution of natural gas to customers within its service area. They regulate pressure, and develop and maintain distribution lines within their service areas.

PSE purchases 100% of the natural-gas supplies needed to serve its customers. About half the gas is obtained from producers and marketers in British Columbia and Alberta, and the rest comes from sources within the Rocky Mountains.

After purchasing natural gas, PSE controls its gas supply by storing gas in large underground facilities, and withdrawing gas in the winter when customer usage is highest. PSE co-owns the largest natural gas storage facilities in the Pacific Northwest in Jackson Prairie, Washington. The storage facility can hold about 44 billion cubic feet of natural gas, and can meet up to 25% of the Pacific Northwest's peak demand on the coldest days in winter. PSE also stores 12.9 billion cubic feet of natural gas in a facility in Clay Basin, Utah. From these storage facilities, PSE transports gas through main pipelines to its service areas in the Puget Sound region, where it is distributed to customers in the region through 21,000 miles of service lines.

Washington State Utilities and Transportation Commission (WUTC) does not define natural gas as an essential service. Therefore, Puget Sound Energy is not required to provide services.

Extension of service is based on individual requests and the results of an analysis to determine if revenues from a developer extension will offset the cost of construction. Overall, Puget Sound Energy does not foresee any problems that would limit the supply of natural gas to the City of Shoreline in the future.

### Transmission Main

Natural gas is currently supplied to most areas within the City of Shoreline through 136 miles of natural gas mains. Gas flows through the system through a 16 inch high pressure force main located along 5<sup>th</sup> Avenue NE. As of December 2011, Puget Sound Energy serves approximately 11,556 customers in the City of Shoreline with natural gas.

### **Distribution Network**

Within the subarea, 4 to 8 inch high pressure mains run along Aurora Avenue N, NE 145<sup>th</sup> Street, 8<sup>th</sup> Avenue NE (between NE 145<sup>th</sup> Street and NE 155<sup>th</sup> Street), NE 155<sup>th</sup> Street, and 9<sup>th</sup> Avenue N (North of NE 155<sup>th</sup> Street). The majority of residential connections are through 5/8 inch laterals. A series of 1-1/4" to 2" distribution mains stem off the transmission mains, serving all



side streets within the subarea. **Figure 3.7-3** illustrates existing natural gas service in the subarea.

### **Current Demand**

Puget Sound Energy serves approximately 760,000 natural gas customers in 10 counties within Washington State. Natural gas connections are extensive within the subarea. No demand quantities are presently available. Based on visual observation, the current configuration adequately services the subarea. Nearly all streets within the subarea contain a natural gas line; however, upsizing lines and connecting stub-outs to form loops may be necessary if the area is further developed.

### 3.7.1 f Communications

#### **Purveyors**

According to the Shoreline Comprehensive Plan, there are multiple communications companies operating within the City of Shoreline. Service within the city is provided through a network of overhead and underground services. Service providers that serve residential and commercial customers in the City of Shoreline are summarized below.

#### Comcast

Comcast provides land-line cable television, internet service, and Voice over Internet Protocol (VoIP) or digital telephone service. The City of Shoreline maintains a franchise agreement with Comcast to maintain and operate their cable and fiber optic network within the city limits. Comcast currently serves the entire City of Shoreline. No maps of Comcast's distribution network are currently available.

#### **Frontier Communications**

Frontier Communications provides land-line cable television, internet service, VoIP, and local telephone service to the community. The City of Shoreline maintains a franchise agreement with Frontier Communications to maintain and operate their cable and fiber optic network within the city limits. There is currently no franchise agreement with Frontier for the local telephone service. Frontier Communications does not serve the subarea. Their main service area is west of Meridian Avenue N and north of N 160<sup>th</sup> Street/NW Innis Arden Way. Frontier Communications currently has a duct bank running through the subarea, though the duct bank is only a tie-in from their service area in the northwest portion of the City of Shoreline and their Seattle Main Switch. Based on a conversation with a network engineer for Frontier Communications, there are no plans to extend services beyond their current service area.

#### CenturyLink

CenturyLink provides local telephone service to the area east of Meridian Avenue N, and south of N 160<sup>th</sup> Street/NW Innis Arden Way. CenturyLink serves the majority of the population within the subarea, serving everyone west of Meridian Avenue N. Currently, they do not have a franchise agreement with the City of Shoreline.

#### **Integra Telecom**

Integra Telecom provides a fiber optic data network within the City of Shoreline. They have a franchise agreement with the City



through July 24, 2026. They primarily serve commercial and institutional users. Their network is primarily along overhead lines. The network enters the City of Shoreline at the intersection of NE 145<sup>th</sup> Street and 5<sup>th</sup> Avenue N, runs east on NE 145<sup>th</sup> Street, and North on 8<sup>th</sup> Avenue NE. A service line continues along NE 155<sup>th</sup> Street across I-5, and south along 1<sup>st</sup> Avenue NE to NE 145<sup>th</sup> Street, where it continues east out of the subarea. Currently there are very few end users within the City of Shoreline. With the potential for future growth within the subarea, Integra Telecom has the potential for more service connections and possibly expanding their network in the future.

### Zayo Group (formerly AboveNet Communications)

Zayo Group provides a fiber optic data network within the City of Shoreline. Prior to being purchased by Zayo Group, AboveNet Communications had a franchise agreement with the City of Shoreline, through September 9, 2021. Zayo Group is a global provider of bandwidth infrastructure services, including dark fiber, wavelengths, SONET, Ethernet, and IP services. They have network in seven countries and 45 states. They primarily serve commercial and institutional users. Zayo Group owns a Metro Dark Fiber Run along the west coast of the United States. The run continues along Aurora Avenue N, just west of the subarea limits. One service lateral branches off at the intersection of NE 165<sup>th</sup> Street and Aurora Avenue N, continues east along NE 165<sup>th</sup> Street, then south along Wallingford Avenue N. The service lateral continues along NE 155<sup>th</sup> Street though the subarea, and north along 8<sup>th</sup> Avenue N to NE 165<sup>th</sup> Street. The dark fiber provides a secure major bandwidth fiber optic connection for commercial and institutional users. Along with Integra Telecom, Zayo Group has the potential for future service connections

within the subarea, if future commercial development growth occurs.

### **Communications Network**

**Figure 3.7-4** at the end of this section shows partial mapping of existing communications lines located within the subarea, as made available for this analysis. There are extensive communication lines and facilities located in the subarea that are not shown in the figure because this information was not made available for the purposes of this analysis.

# Undergrounding of Utility Lines in the City of Shoreline

It is the goal of the City of Shoreline to facilitate undergrounding of utilities including power and communications lines in order to promote the health, safety, and general welfare of the residents of the community by:

- Removing potential hazards and blockages from the rightof-way;
- Achieving a more aesthetically pleasing community while improving property values; and
- Decreasing the vulnerability of service delivery due to the effects of natural disasters and storm events.

A proposed policy for the 145<sup>th</sup> Street Subarea Plan calls for developing a strategy for undergrounding overhead utilities in the subarea. As more capital improvements occur within transportation rights-of-way to facilitate future growth, more of the current overhead utilities could be relocated underground in coordination with the utility providers.



# 3.7.2 Analysis of Potential Impacts

# 3.7.2 a - Impacts Common to All

# Alternatives

The two action alternatives within the subarea would result in population growth. Any significant growth would ultimately require some improvements or upsizing of utilities to serve projected demands. Recommended improvements within this study are based on a planning level of analysis of each utility in relation to the area of rezoning and projected growth. The following recommendations represent an estimate of improvements likely to be necessary within the subarea under either of the action alternatives. Refer to Section 3.7.2b for an in-depth analysis of demand impacts for each rezoning alternative. A brief synopsis of certain facilities impacted by both the 145<sup>th</sup> Street and 185<sup>th</sup> Street subaresas is included in Section 3.7.5

Once the rezoning is adopted, each utility provider would be responsible for conducting more detailed modeling reflecting projected changes in land use in the subarea. With the more detailed modeling, upsizing and other facility improvement needs would be confirmed more definitively. The following improvements would need to be implemented regardless of which alternative is adopted.

### Water

Seattle Public Utilities believes fire suppression is currently adequate within the service area with the exception of three fire hydrants on a 4" diameter pipe south of NE 155<sup>th</sup> Street, along Stone Avenue N, NE 153<sup>rd</sup> Street, and Interlake Avenue N. These three fire hydrants currently provide less than 1,000 gpm of fire flow. The International Fire Code (IFC), Appendix B requires a minimum of 1,000 gpm of fire flow suppression from all hydrants within a pipe network. Regardless of which alternative is selected, this pipe run of 1,300 feet will need to be upsized in order to provide fire suppression flow in the future. The Seattle Public Utilities also contains many water mains 6" or less in diameter, which many end in dead-end stub outs and do not currently contain fire hydrants. If new developments within the Seattle Public Utilities region of the subarea require a higher level of fire suppression, these pipes will need to be upsized and include additional fire hydrants.

The North City Water District contains many 6" diameter water mains with dead end stub outs. These pipes may need to be upsized to provide adequate fire suppression if development occurs within the North City Water District region of the subarea.

### Wastewater

All mainline pipes within the subarea are 8" in diameter or larger. Many of the 8" diameter pipes may need to be upsized to provide suitable collection capacity for sewer flows from new developments when the subarea is rezoned and demand is increased. The subarea is served by gravity mains, and is located at the southern limits of the City of Shoreline. Many neighborhoods and developments feed into the wastewater collection system, including a portion of the 185<sup>th</sup> Street Subarea. Calculations regarding upsizing of the mainlines were based on the 145<sup>th</sup> Street Rezoning Alternatives only. Demand forecasting for areas outside the study area were not included.



### Electricity

No capacity constraints were provided for the electricity network within the City of Shoreline. New development within the subarea may require sections of the overhead electricity lines be placed underground. Costs for undergrounding projects are typically placed on the developers, unless the project is part of a capital improvement project undertaken by the City, in which all utilities are required to be placed underground to accommodate the City's roadway improvements.

### Natural Gas

No demand projections were available under existing conditions, so the capacity of the network could not be analyzed. In order to better serve future development within the subarea, many of the smaller gas mains could be connected to form loops. This information is based on observation. Future improvements and additions to the natural gas network are based solely on future customer requests for service.

### Communications

None of the communications providers provided demand projections within the subarea, so the capacity of each network could not be analyzed.

Frontier Communications recently completed a major utility project within the City of Shoreline. They do not anticipate any improvements in the foreseeable future. The company currently serves only the western portion of the subarea, west of Meridian Avenue N. Their system is currently serving 25% of their projected capacity. They have the ability to take on 300% more customer base within their portion of the subarea. Integra Telecom and Zayo Group serve primarily commercial and institutional customers. Under Alternative 2, 3, or 4, considerably more commercial development is projected within the subarea. With additional commercial development, these communication networks may extend their branch lines further within the subarea. Future improvements are based on forecasted development and anticipated customer request for service.

The only expense projected for communication networks is undergrounding their facilities that currently share poles with overhead electricity lines. Communication networks will be required to place their systems underground if developers or the City of Shoreline decides to underground existing utilities within a section of the city.

# 3.7.2 b - Future Growth Demand

## Forecasting

Future growth demand forecasting for each utility was performed by Otak, Inc. The analysis is based on an estimated utility demand multiplied by projected residential and commercial population forecasting for each zoning alternative. The demand forecasting is used specifically for this EIS analysis for the subarea based on a planning level of analysis. Detailed hydraulic modeling would need to be completed by utility providers in the future as part of updating comprehensive plans/master plans. Demand was forecast for build-out of each alternative. Recommended mitigation measures (including improvements) needed to serve build-out of each alternative is presented later in this section.



### Water

Estimated water demand rates were projected for the three alternatives for the projected population in 2035, based on per capita demand rates discussed in section S.5.1a of this report. **Table 3.7-6** shows the demand for water related to the alternatives.

This analysis, as that for other utilities, was based on review of projected development and population within Traffic Analysis Zones (TAZs) served by the Seattle Public Utilities and North City Water District. Referencing of TAZs, which correlate to census tract population data, is a common practice in planning and assessment of potential impacts as part of environmental analysis. A map of the TAZs related to the subarea and included in the analysis is provided as **Figure 3.7-5** at the end of this section. Refer to this map in review of the discussion below, which describes assumptions related to TAZ areas.

The following recommendations for each alternative are based on a planning level of analysis of the system and review of supply and demand presented in the most current Comprehensive Plan for both the Seattle Public Utilities and North City Water District. Once the rezoning has been adopted for the subarea, both the North City Water District and Seattle Public Utilities would need to update their hydraulic model in congruence with their comprehensive master plans to determine exact upsizing and necessary improvements required to serve the forecasted population and land use.

### Alternative 1—No Action

Based on water demand projections and population growth rates for 2035, implementation of Alternative 1—No Action would have little to no effect on the existing water system. The TAZ with the most improvements would be TAZ 96 and 104 within the North City Water District portion of the subarea, with 110% increase in demand for each zone, and TAZ 93 within the SPU portion, with a 230% increase in growth. The majority of improvements would most likely be upsizing 2" and 4" undersized mains within the subarea to provide adequate fire suppression for new developments.

### Alternative 2— Connecting Corridors Seattle Public Utilities

Complete build-out of Alternative 2, within the Seattle Public Utilities portion of the subarea would generate more demand over a larger area than projected under Alternative 3, with an increase over existing conditions by 320%. TAZ 137 is projected to see the most growth, with an increase of 1,380% over existing conditions; however, all the TAZs are projected to see an increase in population growth. Due to this, improvements would most likely be necessary throughout the Seattle Public Utilities portion of the subarea, including upsizing 2" and 4" mains and upsizing mains along NE 155<sup>th</sup> Street where a large portion of demand generation is forecasted.

#### North City Water District

Complete build-out of Alternative 2—Connecting Corridor would potentially increase water demand by up to 430% of the current demand within the North City Water District's portion of the subarea. Demand generation is very similar to Alternative 3, and though less demand is forecasted in total under Alternative 2, improvements may be more extensive than under Alternative 3, due to the fact that Alternative 2 is projected to generate demand over a larger area. Specifically, north of NE 155<sup>th</sup> Street, Alternative 2 is projected to generate more demand and require additional improvements over Alternative 3. All TAZs within the North City Water District would receive growth and increased demand.

### Alternative 3—Compact Community

#### **Seattle Public Utilities**

The only TAZ projected to see a major increase in demand within the SPU portion of the subarea is TAZ 137, with a 1,620% increase in demand.

#### North City Water District

The majority of demand generation will occur within the North City Water District portion of the subarea. All TAZs within the North City Water District portion would experience growth and increased demand, with the most growth occurring in TAZ 97, 99, 100, 104, 130, and 138, with an average growth increase of 1,550% over existing conditions. These TAZs are located south of NE 155<sup>th</sup> Street. Upsizing would most likely be necessary for all lateral mains within this region as the majority are 6" mains, and may not be large enough to accommodate the increase in population or provide adequate fire suppression under total build out of either action alternative.

	EXISTING CONDITIONS	ALTERNATIVE 1- NO ACTION		ALTERNATIVE 2— CONNECTING CORRIDORS		ALTERNATIVE 3— COMPACT COMMUNITY	
	Total Water Demand (gpd)	Total Water Demand (gpd)	% Growth from Existing	Total Water Demand (gpd)	% Growth from Existing	Total Water Demand (gpd)	% Growth from Existing
Seattle Public Utilities:							
Totals	s 329,000		18%	1,379,000	320%	1,128,000	243%
North City Wate	North City Water District:						
Totals	361,000	361,000 538,000 49%		1,926,000	433%	2,170,000	501%
Total of Both Water Systems	690,000	926,000	34%	3,305,000	379%	3,298,000	378%

#### Table 3.7-6—Demand for Water Service, All Alternatives



### Wastewater

Estimated wastewater demand rates were projected for the three alternatives for the projected population in 2035, based on per capita demand rates discussed in section S.5.1b of this report. The following recommendations for each alternative are based on a visual analysis of the system and review of supply and demand presented in the 2010 Comprehensive Sewer Plan for the Ronald Wastewater District. Once the rezoning alternative has been decided upon for the subarea, Ronald Wastewater District will need to update their hydraulic model to determine exact upsizing and necessary improvements required to serve the forecasted population. **Table 3.7-7** shows the demand for wastewater related to the alternatives.

### Alternative 1—No Action

Based on wastewater demand projections and population growth rates for 2035, implementation of Alternative 1—No Action would have little to no effect on the wastewater system, with 34% increase in projected demand over the existing system. The TAZs which would generate the most demand would be TAZ 93, 96, 104 and 105. Growth projections for Alternative 1—No Action should not require the upsizing of any pipes within the system.

### Alternative 2—Connecting Corridors

Alternative 2—Connecting Corridors is projected to create an increase of wastewater demand by approximately 375% from existing. Increased demand generation would occur throughout the subarea, and all the TAZs are projected to see a substantial increase in demand throughout the subarea. Demand increases are projected to be highest in TAZs along the I-5 corridor, including 96, 97, 99, 100, 104, 130, 137, and 138. Demand increases would most likely extend north along 5<sup>th</sup> Avenue NE, and east along NE 155<sup>th</sup> Street and NE 145<sup>th</sup> Street. The entire subarea is projected to generate 3.86 million gallons of wastewater per day.

### Alternative 3—Compact Community

Complete build-out of Alternative 3—Compact Community would have the largest demand generation forecasted for wastewater collection within the subarea, with a 376% increase in flow rates over the existing system; however, due to the compact zoning improvements, Alternative 2 would require a larger number of improvements. Under Alternative 3, increased demand is projected along the I-5 corridor, with improvements extending easterly to 15<sup>th</sup> Avenue NE, and some growth and improvements projected along NE 155<sup>th</sup> Street. Forecasted demand is expected to be highest in TAZs 97, 99, 100, 104, 105, 130, 137, and 138.



		Demana				natives	
	EXISTING CONDITIONS	ALTERNA NO AC		ALTERNATIVE 2- CONNECTING CORRIDORS		ALTERNATIVE 3— COMPACT COMMUNITY	
	TOTAL SEWER DEMAND (gpd)	TOTAL SEWER DEMAND (gpd)	% Growth from Existing	TOTAL SEWER DEMAND (gpd)	% Growth from Existing	TOTAL SEWER DEMAND (gpd)	% Growth from Existing
Totals	813,000	1,090,000	34%	3,860,000	375%	3,866,000	376%

Table 3.7-7—Demand for Wastewater Service, All Alternatives

### Electricity

Estimated demand rates for electricity were projected for the three alternatives for the projected population. **Table 3.7-8** shows the demand for electricity related to the alternatives.

### Alternative 1 – No Action

Based on energy demand projections and population growth rates for 2035 Alternative 1 – No Action would have little to no effect on the electricity system network. The TAZs with the most demand generation would be TAZ 93, 96, 104,105, and 129.

### Alternative 2—Connecting Corridors

Alternative 2—Connecting Corridors is projected to create an increase of energy demand by approximately 417% from existing. Nearly all the TAZs are projected to see a substantial increase in demand throughout the subarea. Demand increases are projected to be highest in TAZs along the I-5 corridor, including 96, 97, 99, 100, 130, 137, and 138. Demand increases would most likely extend north along 5<sup>th</sup> Avenue, and east along NE 155<sup>th</sup> Street and NE 145<sup>th</sup> Street. The entire subarea is projected to generate a demand of 4.90 billion BTUs per day.

### Alternative 3—Compact Community

Alternative 3—Compact Community is projected to create an increase of energy demand by approximately 400% from existing. The zones projected to receive a substantial increase in demand include TAZ 25, 97, 99, 100, 103, 104, 130, 137, and 138. The entire subarea is projected to generate a demand of 4.74 billion BTUs per day.



Table 5.7-8—Demand for Electricity Service, All Alternatives						
EXISTING CONDITIONS	ALTERNATIVE 1— NO ACTION		ALTERNATIVE 2— CONNECTING CORRIDORS		ALTERNATIVE 3— COMPACT COMMUNITY	
Energy (Thousand BTU/Day)	Total Energy (Thousand BTU/Day)	% Growth from Existing	Energy (Thousand BTU/Day)	% Growth from Existing	Energy (Thousand BTU/Day)	% Growth from Existing
 948,000	1,285,000	36%	4,900,000	417%	4,737,000	400%

 Table 3.7-8—Demand for Electricity Service, All Alternatives

### 3.7.3 Mitigation Measures

## 3.7.3 a - Incorporated Plan Features

Incorporated plan features include improvements to services and facilities that are already being planned by the utility providers. These are described below to the extent that information was made available by existing providers. Additional improvements to the ones listed will be necessary to accommodate future development, depending on which land use plan is implemented. Refer to Section 3.7.3c for an approximate list of improvements necessary for each alternative in relation to the affected utility. Planned utility improvements in the subarea, along with additional recommended improvements to support implementation of the action alternatives (Alternatives 3, 2, or 1) are illustrated in **Figures 3.7-9 through 3.7-12** at the end of this section.

### Water

### Seattle Public Utilities

The SPU 2013 Water System Plan describes general funding allocation for different aspects of the water system. Due to the

broad overview of the SPU 2013 Water System Plan, details were not specific to the Shoreline area, and in particular the region surrounding the subarea.

The only major capital improvement project that will affect the SPU portion of the subarea is the removal of the Foy Standpipe. The standpipe was constructed in 1933, and according to the 2013 Water System Master Plan, the standpipe was planned to be decommissioned in 2013. The standpipe is located at the intersection of NE 145<sup>th</sup> Street and Dayton Avenue N. The standpipe assisted serving the surrounding community with water storage. Due to the Foy Standpipe's proximity to the Bitter Lake Reservoir, located two blocks to the southeast, the standpipe was determined to no longer be a beneficial storage facility to the community.

The standpipe is located outside of the subarea, but demand generated from the subarea could be served by the Foy Standpipe and/or the Bitter Lake Reservoir. The section of the subarea that would be directly impacted by the Foy Standpipe will generate very little demand in relation to the rest of the subarea under all three scenarios, and the removal of the standpipe should have no effect on supplying potable water to the subarea.



### North City Water District

The North City Water District is in the process of completing their ten-year Capital Improvement Plan from 2016 through 2026. The district is currently installing a new pump station to improve fire flow, and increase water circulation to portions of the North City Water District's service area. The addition of the new pump station will change their current hydraulic model. Once the pump station is running and they calibrate their hydraulic model, they plan to finalize their updated Capital Improvement Plan for the next 10 to 20 years, by the end of 2016. The following list of projects affecting the subarea is from their 2011 Water System Master Plan containing the most current published CIP list. The list contains recently completed and planned capital projects within the subarea for a 30-year improvement plan. Several of these projects have already been completed. The CIP list may change once their hydraulic model is updated.

- 1. Create the new 515 Pressure Zone. The North City Water District's portion of the subarea will predominately be within this new pressure zone. The total estimated cost to create the new pressure zone is \$2,212,000, and is proposed for the year 2020. In order to create the new zone the following items need to occur:
  - a. New supply station feeding directly off the Tolt Transmission Main. The new supply station would be located near the intersection of NE 145<sup>th</sup> Street and 5<sup>th</sup> Avenue N. The estimated cost is \$330,000.
  - b. New transition main along NE 155<sup>th</sup> Street from 6<sup>th</sup> Avenue N to 9<sup>th</sup> Avenue N, to provide looping at zone boundary and maintain fire flow capacity. This will provide zone separation between the

new 515 Pressure Zone and the 615 Pressure Zone. The estimated cost is \$169,000.

- c. New parallel 8" and 10" transmission mains for a total length of 2,640 feet, along NE 158<sup>th</sup> Street and NE 160<sup>th</sup> Street, between 10<sup>th</sup> Avenue N and 15<sup>th</sup> Avenue N. Work includes installing a Pressure Reducing Valve (PRV) and new meter between the two pressure zones. The estimated cost is \$1,162,000.
- d. New 8" transmission main along NE 160<sup>th</sup> Street, between 26<sup>th</sup> Avenue NE and 27<sup>th</sup> Avenue NE for a total length of 1,000 feet, including a new PRV and backflow check valve between the two pressure zones. The project is not located within the subarea, but would assist the formation of the new pressure zone, ultimately assisting service within the subarea. The estimated cost is \$462,000.
- e. New 8" parallel transmission line along 5<sup>th</sup> Avenue NE, between NE 155<sup>th</sup> Street and NE 156<sup>th</sup> Street, for a total length of 210 feet. The project will provide looping at the pressure zone boundary and assist with fire flow capacity. The estimated cost is \$89,000.

This project will greatly affect the subarea. Demand projections associated with the selected alternative should be entered into the North City Water District's hydraulic model to help project demand on the entire system, and determine the extent of improvements necessary to create the new 515 Pressure Zone, including



verifying the necessary withdrawal rate needed from the proposed Supply Station #5.

Replace 1,380 feet of 4" main with an 8" main along NE 151<sup>st</sup> Street and NE 152<sup>nd</sup> Street between 8<sup>th</sup> Avenue NE and 10<sup>th</sup> Avenue NE, to meet fire flow velocity criteria. The estimated cost of improvements is \$619,000, and is proposed for 2026.

This improvement will greatly affect the subarea, especially for Alternatives 2 and 3 in TAZ 99, where the area is projected to see a 680% increase in water demand generation under Alternative 2 and 880% increase in water demand generation under Alternative 3. Depending on the alternative selected, this section of pipe may need to be increased to a larger diameter pipe to accommodate future demands.

Connect two 8" dead end mains near the intersection of 10<sup>th</sup> Avenue NE and NE 152<sup>nd</sup> Street with 140 feet of new pipe to improve water quality and flow within the pipe network. The estimated cost is \$74,000, and is proposed for 2026.

Similar to item 2, this improvement will greatly affect the subarea, especially for Alternatives 2 and 3, located in TAZ 99, where the area is projected to see a 680% increase in water demand generation under Alternative 2, and 880% increase in water demand generation under Alternative 3. Depending on the alternative selected, not only may these water mains need to be connected, but the entire

section of pipe may need to be increased to a larger diameter pipe to accommodate future demands.

The following CIP projects for the North City Water District will have little effect on the subarea. However depending on the zoning alternative selected, the subareas projected demands may impact these CIP projects. The North City Water District may need to reevaluate these projects' size and location depending on hydraulic modeling with the selected alternative's demands incorporated into the model:

- Install 600 feet of new 12" transmission main along NE 160<sup>th</sup> Street, between 8<sup>th</sup> Avenue NE and 10<sup>th</sup> Avenue NE. This project will help section off the 615 Pressure Zone, located just north of the subarea. The estimated cost is \$116,000, and is proposed for 2020.
- Provide separation for the 615 Pressure Zone by closing existing values at seven locations. One location is at the intersection of NE 156<sup>th</sup> Street and 5<sup>th</sup> Avenue NE, one block north of the subarea. The estimated cost is \$113,000, and is proposed for 2020.
- Provide separation for the 615 Pressure Zone at the intersections of 12<sup>th</sup> Avenue NE and NE 180<sup>th</sup> Street, 5<sup>th</sup> Avenue NE and NE 155<sup>th</sup> Street, and 3<sup>rd</sup> Avenue NE and NE 157<sup>th</sup> Street. The estimated cost is \$114,000, and is proposed for 2020.

These three proposed CIP projects are located just north of the subarea. Alternative 2 – Connecting Corridors would have the most effect on these three projects, as growth is

projected around these locations. These projects are located within TAZs 96 and 129. Alternative 2 is projected to generate a 300% increase in demand within these two TAZs. Additional demand within the vicinity may change the design of these three projects.

### Wastewater

Ronald Wastewater currently has no capital improvement projects proposed within the subarea.

## Electricity

Seattle City Light does not generate a comprehensive plan of capital improvement projects. The main project underway within the City of Shoreline is undergrounding a section of electricity lines running along the Aurora Avenue N (Hwy 99) corridor. This project will abut the subarea, but should not have any major effect on rezoning within the subarea.

### Natural Gas

Puget Sound Energy does not generate a comprehensive plan of improvement projects. Additionally, Washington State Utilities and Transportation Commission (WUTC) does not define natural gas as an essential service. Therefore, Puget Sound Energy is not required to provide service. Extension of service is based on individual requests. Overall, Puget Sound Energy does not foresee any problems that would limit the supply of natural gas to the City of Shoreline in the future.

### Communications

**Future Telephone Services and Facilities** 

According to the City of Shoreline's Comprehensive Plan, Washington Utilities Trade Commission regulations require CenturyLink and Frontier to provide adequate telecommunications service on demand; and Section 480-120-086 of the Washington Administrative Code (WAC) requires CenturyLink and Frontier to maintain adequate personnel and equipment to handle reasonable demand and traffic. Because CenturyLink and Frontier provide service on demand, there are no limits to future capacity. Additionally, telephone service should only be restricted by bandwidth constraints on fiber optic networks that provide this digital service.

# Future Cable Television and Broadband Services and Facilities

Although the demand for cable television is likely to continue to increase as population grows, access to cable television in Shoreline is likely to increase at the same pace as population growth. However, the demand for broadband services, including cable television, telephone and internet services, is likely to continue to grow as networks are supported with additional bandwidth. This growth will most likely occur relative to internet service, as more content becomes accessible online, and as people continue to communicate and interact online. These broadband services can be provided over fiber optic, cable, or telephone networks.



# **3.7.3 b** - Other Potential Mitigation Measures

### Water

#### **Seattle Public Utilities**

**Table 3.7-9** contains a list of distribution and transmission main improvements projected to accommodate future demands associated with each alternative.

#### Table 3.7-9 Seattle Public Utilities – Water System

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aes	
8" Main	12" Main
(Feet)	(Feet)
1,600	0
11,200	7,200
6,100	4,100
	8" Main (Feet) 1,600 11,200

### Alternative 1—No Action

With only an 18% increase in demand over current conditions, minimal improvements are anticipated under Alternative 1 – No Action. TAZ 93 is projected to have 230% increase over existing conditions, and a few 4" dead-end mains may need to be upsized to 8" mains to provide adequate service to residences. Additionally, a loop of 4" mains within TAZ 25, along Stone Avenue N, N 153<sup>rd</sup> Street, and Interlake Avenue N may need to be upsized to 8" mains even though no rezoning is projected for TAZ 25. This section of water main contains three fire hydrants that do not supply adequate fire flow suppression to meet the current fire code. Upsizing this section of pipe to 8" mains is probable under all three alternatives. Approximately 1,600 feet of water mains may need to be upsized to 8" diameter mains under Alternative 1.

### Alternative 2 & 3–20 Year Improvements

Alternatives 2 and 3 are projected to generate very similar demands within the subarea through 2035. For the next 20 years, increased demand within the Seattle Public Utilities portion of the subarea would primarily be within TAZ 137, converting primarily R-6 zones to Mixed Use Residential (MUR) developments of 35 to 85 feet depending on which alternative is selected. A number of the existing pipes within this TAZ are 4" and 6" diameter pipes, which may not be adequate for fire flow or water circulation under either alternative 2 or 3. Approximately 6,600 feet of existing 4" and 6" diameter mains may need to be upsized to 8" mains within the next 20 years, including the following:

- 400 feet of pipe along NE 153<sup>rd</sup> street from Meridian Avenue N to Corliss Place N.
- 600 feet of pipe along Corliss Avenue N, from NE 149<sup>th</sup> Street to NE 148<sup>th</sup> Street. This section of pipe may need to be upsized to 12" diameter mains under full build-out of either scenario.
- 400 feet of pipe along NE 150<sup>th</sup> Street, from Meridian Avenue NE to Corliss Avenue NE. This section of pipe may need to be upsized to 12" diameter mains under full build-out of either scenario.
- 500 feet of pipe along NE 148<sup>th</sup> Street from Meridian Avenue NE to Corliss Avenue NE.
- 350 feet along Corliss Avenue NE, from NE 148<sup>th</sup> Street to NE 147<sup>th</sup> Street.

- 700 feet along NE 147<sup>th</sup> Street, from Corliss Avenue NE to 1<sup>st</sup> Avenue NE.
- 450 feet along 1<sup>st</sup> Avenue NE, from NE 147<sup>th</sup> Street to NE 145<sup>th</sup> Street. This section of pipe may need to be upsized to 12" diameter mains under full build-out of either scenario.
- 600 feet along NE 147<sup>th</sup> Street, from the edge of the culde-sac to 1<sup>st</sup> Avenue NE.
- 9. 350 feet along NE 146<sup>th</sup> Street, from the edge of the culde-sac to Corliss Avenue NE.
- 10. 1,250 feet within the loop south of NE 155<sup>th</sup> Street, along NE 153<sup>rd</sup> Street to Stone Avenue NE to Interlake Avenue NE. Demand is not projected to be extensive within this neighborhood; however fire hydrants within this loop currently do not meet current standards for fire flow, and may need to be upsized regardless of which alternative is selected.

### Alternative 2—Connecting Corridors

A 24" diameter high pressure main runs along NE 145<sup>th</sup> Street from a supply station at the intersection o f NE 145<sup>th</sup> Street and 5<sup>th</sup> Avenue N to Greenwood Avenue N, and along Aurora Avenue N, from NE 145<sup>th</sup> Street to NE 185<sup>th</sup> Street. The 24" diameter pipe was constructed in 1933 and relined in the 1980s. The 24" main serves as the main transmission main serving SPU's section of the subarea. The 24" main appears to have enough capacity to serve the growing community, though a hydraulic analysis should be completed with forecasted demands, based on the selected alternative, to evaluate the ability of the 24" main to serve the community in the future. Alternative 2 – Connecting Corridors would generate more demand within the SPU portion of the subarea over a greater area than Alternative 3. Improvements to pipes within TAZs 136 and 137 would be very similar to Alternative 3, with added improvements to NE 154<sup>th</sup> Street, Corliss Place N, and NE 153<sup>rd</sup> Street, all within TAZ 126. Rezoning is proposed along NE 155<sup>th</sup> Street and NE 145<sup>th</sup> Street under Alternative 2. This may require upsizing a large portion of 8" water main along NE 155<sup>th</sup> Street, to 12" mains between Aurora Avenue N and Meridian Avenue N. Additionally, a number of dead-end 2" and 4" mains currently serving R-6 zones may need to be upsized to 8" mains if the zoning changes to a more urban development under this alternative. Approximately 11,200 feet of water mains may need to be upsized to 8" diameter, and 7,200 feet of mains may need to be upsized to 12" diameter to serve the projected demands.

### Alternative 3—Compact Community

Alternative 3 – Compact Community has a relatively small area of direct impact within the Seattle Public Utilities District boundary. The region expected to receive the most growth would be within TAZs 136 and 137, and would be bounded by Meridian Avenue N to the west, I-5 to the east, NE 155<sup>th</sup> Street to the north, and NE 145<sup>th</sup> Street to the south. A number of undersized 2" and 4" mains may need to be upsized throughout the SPU's region of the subarea, especially within TAZ 137. A number of mains may need to be upsized to 12" diameter pipes to connect the existing 8" main along NE 155<sup>th</sup> Street to the 24" transmission main along NE 145<sup>th</sup> Street, through TAZ 136 and 137 to increase water circulation and improve fire flow for the projected demands. Approximately 6,100 feet of water mains may need to be upsized



to 8" pipes and 4,100 feet of water mains may need to be upsized to 12" diameter to serve the projected demands.

#### **North City Water District**

**Table 3.7-10** contains a list of distribution and transmission mainimprovements projected to accommodate future demandsassociated with each alternative. The analysis performed wasbased on existing conditions. If the North City Water Districtcreates the 515 Pressure Zone in the future, system upsizing maybe different, based on proximity to a source of supply, anddifferent pressure gradients.

The majority of the subarea is located within the North City Water District's 590 pressure zone. While the subarea is currently zoned primarily residential, redevelopment under any of the action alternatives (3 or 2) would introduce more intensive residential uses as well as neighborhoods-supporting commercial/retail. This change in land use would create a substantial increase in demand within this pressure zone.

Table 3.7-10
North City Water District – Water System
Upgrades

	8" Main	12" Main			
Alternative	(Feet)	(Feet)			
#1—No Action	4,600	0			
#2—Connecting Corridors	20,700	21,300			
#3—Compact Community	10,900	24,100			

The North City Water District generated historical and projected water demands for the system, for each pressure zone. **Table 3.7-**

**11** contains a comparison of the 2030 projected demand on the 590 pressure zone based on the existing growth rates, and demand estimated for the study are based on the rezoning alternatives.

According to this comparison, Alternatives 3 and 2 would generate far more demand than the entire pressure zone generates. Major system improvements likely would be necessary to accommodate the influx of demand generation within the North City Water District's portion of the subarea. Improvements to the water system are determined based on projected development growth and land use type.

#### Table 3.7-11

#### North City Water District – Demand Comparison

		ADD (MGD) <sup>1</sup>
Pressure	Zone 590 - Year 2030	0.41
Subarea	Existing Conditions	0.36
	Alternative 1—No Action	0.54
	Alternative 2—Connecting	
	Corridors	1.93
	Alternative 3—Compact	
	Community	2.17

1. MGD = Million Gallons per Day

The potential improvements for each alternative are based on a planning level of analysis of the system. Utility providers would need to conduct detailed hydraulic modeling as part of future comprehensive planning/master planning updates to determine specific upsizing and facility improvement needs. The analysis



shows the potential demand on the system assuming the subarea is completely built out to the adopted zoning code.

Recommendations are based a conceptual schematic of what improvements likely would be necessary once the subarea is constructed to the limits of the proposed zoning area. Twenty year improvement needs are projected based on an anticipation of what would be needed to serve growth up to 2035, but assuming that some upsizing to levels that would serve full buildout may be needed. (It is not assumed that the utility providers would continually upgrade facilities multiple times, but rather would install facilities to serve the longest periods of growth possible

As part of future planning and analysis, utility providers would complete their own analyses to determine the appropriate phasing of improvements in the most efficient manner to serve growth over the next twenty years and beyond.

#### Alternative 1—No Action

Improvements necessary for Alternative 1 would coincide with the Capital Improvements Plan adopted by the District. Other improvements may include upsizing the 6" main along 10<sup>th</sup> Avenue N from N 155<sup>th</sup> Street to N 160<sup>th</sup> Avenue to accommodate demands generated in TAZs 98 and 129. Also improvements may need to occur in TAZ 105, which would receive an 86% increase in demand generation over existing conditions. This may require upsizing mains along NE 146<sup>th</sup> through 148<sup>th</sup> Streets and possibly installing a new pipe along 16<sup>th</sup> Avenue N between NE 145<sup>th</sup> Street and NE 150<sup>th</sup> Street to help circulate flow within the system. Approximately 4,700 feet of pipe may need to be upsized or installed to serve the projected demands.

#### Alternative 2 or 3—Twenty Year Improvements

Similar to the Seattle Public Utilities portion of the subarea, Alternatives 2 and 3 are projected to generate very similar demands within the subarea through 2035. Within the next 20 years, the North City Water District portion of the subarea is projected to increase demand by 88% percent, with the most demand projected within TAZs 97, 99, 100, 104, 130, and 138. Approximately 12,000 feet of existing 6" diameter mains may need to be upsized to 8" mains within the next 20 years, including the following:

- 350 feet along NE 153rd Street, from the edge of cul-desac to 5th Avenue NE. This section of pipe may need to be upsized to 12" diameter mains under full build-out of either scenario.
- 1,900 feet within the loop west of 5th Avenue NE, along NE 151st Street, 3rd Avenue NE, and NE 152nd Street. This section of pipe may need to be upsized to 12" diameter mains under full build-out of either scenario.
- 2,000 feet along NE 152<sup>nd</sup> Street , from 5<sup>th</sup> Avenue NE to 12<sup>th</sup> Avenue NE. This section of pipe may need to be upsized to 12" diameter mains under full build-out of either scenario.
- 550 feet along 8<sup>th</sup> Avenue NE, from NE 147<sup>th</sup> Street to NE 145<sup>th</sup> Street. This section of pipe may need to be upsized to 12" diameter mains under full build-out of either scenario.
- 500 feet along NE 149<sup>th</sup> Street, from the end of the cul-desac to 5<sup>th</sup> Avenue NE. This section of pipe may need to be upsized to 12" diameter mains under full build-out of either scenario.



- 1,150 feet within the loop south of NE 147<sup>th</sup> Street, along 9<sup>th</sup> Avenue NE, NE 146<sup>th</sup> Street, and 9<sup>th</sup> Place NE.
- 1,400 feet within the loop east of 8<sup>th</sup> Avenue NE, along NE 150<sup>th</sup> Street, 9<sup>th</sup> Place NE, NE 148<sup>th</sup> Street, and 9<sup>th</sup> Avenue NE.
- 900 feet along 10<sup>th</sup> Avenue NE, from NE 155<sup>th</sup> Street to NE 152<sup>nd</sup> Street.
- 650 feet along NE 151<sup>st</sup> Street, from 8<sup>th</sup> Avenue NE to 10<sup>th</sup> Avenue NE.
- 2,650 feet along 12<sup>th</sup> Avenue NE, from NE 155<sup>th</sup> Street to NE 145<sup>th</sup> Street. This section of pipe may need to be upsized to 12" diameter mains under full build-out of either scenario.

### Alternative 2—Connecting Corridors

Alternative 2 – Connecting Corridors would generate high demands within TAZs 97, 99, 100, 103, 104, 130, and 138, with nearly the same amount of demand as generated in Alternative 3, most likely requiring a number of the existing 6" and 8" water to be upsized, and dead end mains connected into loop networks to improve pressure distribution and fire flow suppression throughout the region bounded by NE 155<sup>th</sup> Street to the north, NE 145<sup>th</sup> Street to the south, I-5 to the west, and 16<sup>th</sup> Avenue to the east.

Under alternative 2, demand generation would expand past the northern boundary of NE 155 Street within TAZs 96, 98, and 129, potentially requiring water main upsizing to extend along 3<sup>rd</sup>, 5<sup>th</sup>, 6<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, 12<sup>th</sup>, and 14<sup>th</sup> Avenues. Additionally to close the loop between 10<sup>th</sup> Avenue and 15<sup>th</sup> Avenue, an additional 8" water main may need to be installed along NE 158<sup>th</sup> Street (currently within the North City Water District's Capital

Improvement Plan). Approximately 20,700 feet of water mains may need to be upsized to 8" pipes and 21,300 feet of water mains may need to be upsized to 12" diameter to serve the projected demands. In addition, the storage reservoirs servicing the applicable pressure zone within the subarea should be analyzed to verify adequate storage is accessible to residents for fire suppression and recommended two-day standby storage if a water source becomes off line.

#### **Alternative 3—Compact Community**

Similar to Alternative 2, high demands projected within TAZs 97, 99, 100, 103, 104, 130, and 138, would most likely require a number of the existing 6" and 8" water mains to be upsized, and dead end mains connected into loop networks to improve pressure distribution and fire flow suppression throughout the region bounded by NE 155<sup>th</sup> Street to the north, NE 145<sup>th</sup> Street to the south, I-5 to the west, and 16<sup>th</sup> Avenue to the east. The 8" main along 8<sup>th</sup> Avenue NE and along NE 147<sup>th</sup> Street and NE 148<sup>th</sup> Street may need to be upsized to 12" mains to accommodate demands, due to the change from R-6 zoning to Mixed Use Residential with 35 foot to 45 foot high buildings throughout this portion of the subarea. Approximately 10,900 feet of water mains may need to be upsized to 8" pipes and 24,100 feet of water mains may need to be upsized to 12" diameter to serve the projected demands. In addition, the storage reservoirs servicing the applicable pressure zone within the subarea should be analyzed to verify adequate storage is accessible to residents for fire suppression and recommended two-day standby storage if a water source becomes off line.



### Draft Environmental Impact Statement

### Wastewater

**Table 3.7-12** contains a list of sewer main improvementsprojected to accommodate future demands associated with eachalternative.

			Potential	Potential	
	12" to	18" or	Upsize of	Upsize of	
	15"	Larger	18" Trunk	30" Trunk	
Alternative	Main <sup>1</sup>	Main <sup>2</sup>	Main	Main	
#1 —					
No Action	0 ft	0 ft	0 ft	0 ft	
#2 —					
Connecting Corridors	8,800 ft	3 <i>,</i> 000 ft	130ft	1,400 ft	
#3 —					
Compact Community	8,400 ft	2,300 ft	130 ft	1,400 ft	

Ronald Wastewater District – System Upgrades

### Alternative 1—No Action

Potential demand generation from the Alternative 1—No Action would create a 34% increase in wastewater generation. No pipe upsizing should be necessary to accommodate future growth, based only on demand projections within the subarea. The analysis did not consider wastewater generated outside of the subarea in combination with the projected demands. No costs are associated with the adoption of Alternative 1.

### Alternative 2 or 3—Twenty Year Improvements

Alternatives 2 and 3 are projected to generate very similar demands within the subarea through 2035. Within the next 20 years, Ronald Wastewater District is projected to increase demand by 68% percent within the subarea, with the most demand projected within TAZs 97, 99, 100, 104, 130, 137, and 138. Based on the assumption of maximum sewer flow rates with minimum pipe slope for demand generated solely from development within the subarea, all pipes within the subarea are of adequate size to accommodate the projected population for the next 20 years, with the exception of one pipe run.

According to the most recent GIS information, supplied by the City of Shoreline, the trunk main collecting wastewater for basin #24, located, through an easement east of 9<sup>th</sup> Avenue NE, reduces from an 18" diameter pipe to a 10" diameter pipe between NE 146<sup>th</sup> Street and NE 145<sup>th</sup> Street. This 130 foot section of pipe would most likely need to be upsized to an 18" diameter pipe if Alternative 2 or 3 is selected. Before complete build-out of either Alternative 2 or 3, this section of pipe would need to be reevaluated, and may need to be upsized to a 24" diameter pipe. The pipe run enters the City of Seattle, on the south side of NE 145<sup>th</sup> Street. Additional evaluation will need to occur to verify the pipe diameter is adequate with the inclusion of additional flows from customers in Seattle.

### Alternative 2—Connecting Corridors

Alternative 2 – Connecting Corridors would generate nearly the same amount of demand as generated in Alternative 3. Under Alternative 2, demand generation would expand past the northern boundary of NE 155 Street within TAZs 96, 98 and 129, potentially requiring sewer main upsizing to extend along 8<sup>th</sup> Avenue NE from NE 160<sup>th</sup> Street to NE 150<sup>th</sup> Street, increasing the pipe diameter to a 12" diameter pipe; and from NE 150<sup>th</sup> Street to NE 145<sup>th</sup> Street, where it may need upsizing to an 18" diameter pipe.



A 30" diameter trunk main runs along the eastern edge of the I-5 corridor, collecting wastewater flow from as far north as NE 190<sup>th</sup> Street, down through regions within the subarea, and exiting the City at NE 145<sup>th</sup> Street. Disregarding all wastewater collection north of the subarea, the 30" pipe may need to be evaluated for capacity based solely on the projected wastewater collection within the subarea. Based on the observed collection area connecting to the 30" transmission main, and a multiplier of 4 to convert average daily demand to peak demand, the 30" trunk main may receive up to 13.4 cubic feet per second (cfs) of wastewater. According to Table 28.3 of the Civil Engineering Reference Manual, 12<sup>th</sup> Edition, a 30" diameter pipe flowing full at a minimum slope can handle 9.96 cfs. Since slope of the 30" trunk main was not evaluated, a conservative assumption was used that the pipe was constructed with a minimum slope. For purposes of quantifying improvements, approximately 1,400 feet of the 30" trunk main was assumed to need upsizing to a 36" main, from NE 149<sup>th</sup> Street to NE 145<sup>th</sup> Street. The pipe was not evaluated south of NE 145<sup>th</sup> Street, as this is where it enters the City of Seattle. Once the main crosses south of NE 145<sup>th</sup> Street, it is owned and operated by King County.

The trunk main located between NE 146<sup>th</sup> Street and NE 145<sup>th</sup> Street, through an easement east of 9<sup>th</sup> Avenue NE leaves the City of Shoreline through a series of 18" diameter mains. This trunk main is the primary transmission main collecting wastewater from basin #24 within the Ronald Wastewater District. Within the easement between NE 146<sup>th</sup> Street and NE 145<sup>th</sup> Street, the pipe is reduced to a 10" diameter main. This main will most likely need to be upsized. To accommodate the projected flows from Alternative 2, excluding additional flow from outside of the subarea, the pipe may need to be upsized to a 24" main. The pipe was not evaluated south of NE 145<sup>th</sup> Street, as this is where it enters the City of Seattle. Approximately 130 feet of this trunk main may need to be upsized to 24" diameter pipe.

The existing 12" main under Interstate-5 along NE 149<sup>th</sup> Street may need to be upsized to an 18" diameter main to accommodate potential flow from TAZs 94, 136, and 137.

The same evaluation from the Civil Engineering Reference Manual, 12<sup>th</sup> Edition was performed on all main collection pipes within the subarea. The existing 8" diameter mains along 5<sup>th</sup> Avenue NE and 6<sup>th</sup> Avenue NE, from NE 152<sup>nd</sup> Street to NE 145<sup>th</sup> Street; and along 15<sup>th</sup> Avenue NE, from NE 148<sup>th</sup> Street to NE 145<sup>th</sup> Street may need to be upsized to 12" mains. Also upsizing may need to occur along NE 155<sup>th</sup> Street from Ashworth Avenue N to Meridian Avenue N through a combination of 12" and 18" diameter mains.

In total, approximately 8,800 feet of sewer mains should be upsized to 12" diameter mains, 3,000 feet of sewer mains should be upsized to 18" diameter mains, 130 feet of the 10" diameter sewer trunk main may need to be upsized to a 24" diameter main, and 1,400 feet of the 30" trunk main may need to be upsized to a 36" diameter main under Alternative 2.

#### Alternative 3—Compact Community

Alternative 3 is projected to increase demand primarily between Meridian Avenue N to the west, 15<sup>th</sup> Avenue NE to the east, NE 155<sup>th</sup> Street to the north, and NE 145<sup>th</sup> Street to the south. The 30" trunk main along the I-5 corridor may need to be upsized to a 36" diameter main, from NE 149<sup>th</sup> Street to NE 145<sup>th</sup> Street based solely on demand projections within the subarea.

130 feet of the 10" diameter trunk main through the easement east of 9<sup>th</sup> Avenue NE, between NE 146<sup>th</sup> Street to NE 145<sup>th</sup> Street may need to be upsized to a 24" diameter main. Also the two existing pipes under I-5, connecting pipe runs within TAZs 136 and 137 along NE 149<sup>th</sup> Street and NE 147<sup>th</sup> Street may need to be upsized to accommodate the increase in flow.

Additionally 8" mains located along 5<sup>th</sup> Avenue NE, and 6<sup>th</sup> Avenue NE, from NE 155<sup>th</sup> Street to NE 145<sup>th</sup> Street; along 8<sup>th</sup> Avenue NE, from NE 155<sup>th</sup> Street to NE 150<sup>th</sup> Street; and along 15<sup>th</sup> Avenue NE, from NE 148<sup>th</sup> Street to NE 145<sup>th</sup> Street may require upsizing. These pipes, under minimum slope and full flow condition may require upsizing to 12" pipes, based solely on projected demand within the subarea.

In total, approximately 8,400 feet of sewer mains should be upsized to 12" diameter mains, 2,300 feet of sewer mains should be upsized to 18" diameter mains, 130 feet of the 10" diameter sewer trunk main may need to be upsized to a 24" diameter main and 1,400 feet of the 30" trunk main may need to be upsized to a 36" diameter main under Alternative 3.

### Electricity

Although no data was made available for Seattle City Light's existing distribution network, primary improvement to the system would be undergrounding existing overhead lines when new developments are constructed within the subarea, as feasible.

#### Alternative 1—No Action

The primary energy demand increase would occur in TAZs 93, 96, and 105. Though nowhere near the demand generation projected under Alternative 2 or 3, these areas are located at the far ends of the subarea, away from Seattle City Light's transmission corridor. These areas may require additional distribution lines and transformers to provide adequate service to customers.

#### Alternative 2—Connecting Corridors

Alternative 2 would create a spread out demand generation over all of the TAZs. The TAZs that are projected to see the most increase in demand are TAZ 25, 96, 97, 99, 100, 130, 137, and 138. The majority of demand generation is projected near the transmission corridor along 8<sup>th</sup> Avenue N, requiring minimal upsizing of power lines. However, extensive demand generation would occur as far away as Aurora Avenue N under this zoning scenario. Increased demand is projected predominately along NE 155<sup>th</sup> Street and NE 145<sup>th</sup> Street, potentially requiring additional distribution lines and transformers along these streets, as well as connections across Interstate 5.

#### Alternative 3—Compact Community

The majority of the subarea would see a substantial increase in energy use under Alternative 3 at build-out, but this would occur gradually over many decades. TAZs 25, 97, 99, 100, 103, 104, 130, 137, and 138 are projected to increase substantially in electricity demand. These TAZs are located around the I-5 Corridor, between NE 155<sup>th</sup> Street to the north, NE 145<sup>th</sup> Street to the south, Meridian Avenue N to the west, and 15<sup>th</sup> Avenue N to the east. Electricity demand generation is projected to increase by 1,600% collectively for these TAZs. All the mentioned TAZs, with



the exception of TAZ 137 are located East of I5, near the Seattle City Light Transmission Corridor. Power line upsizing and distribution line coverage within these TAZs would be relatively simple, do to their proximity to the transmission main corridor. Increasing power to TAZ 137 and 136 may require upsizing the connection underneath I-5. No issues are anticipated in acquiring the additional energy supply to serve the subarea. Zones west of I-5 are located further from the Seattle City Light transmission corridor and may require upsized distribution lines and transformers to adequately serve these areas.

### Natural Gas

No data was provided to support analysis of demand for Puget Sound Energy natural gas. Puget Sound Energy is a privately owned company. All improvements are based on future customer requests, and funding for future growth would be financed by customer fees within the region. Because natural gas is readily available to the area, it is not anticipated that there would be any issues in extending service to accommodate future growth.

## Energy Efficiency and District Energy Considerations

Related to energy use, including electricity and natural gas, technological advancements in building systems and design are improving efficiency on an ongoing basis. New developments are more commonly integrating green building and alternative energy systems (solar, geothermal, etc.), as well as more energy efficient design and fixtures. These approaches will maximize energy conservation and help the region and city achieve Climate Action Plan goals, in addition to reducing impacts on energy providers. The City intends to explore the potential implementation of district energy and encourage combined heat and power systems with redevelopment as called for in the Subarea Plan policies. The City also intends to pursue a solarization program, community solar, or other innovative ways to partner with local businesses and organizations to promote installation of photovoltaic systems.

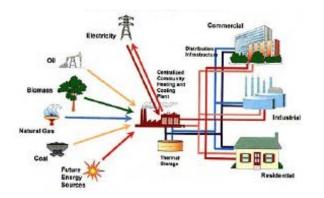
## **Potential District Energy Systems**

Community and district energy systems refer to the technologies for local generation, distribution and efficient end-use of energy in residential, commercial, industrial, and municipal structures, infrastructure and processes. A comprehensive district energy system also entails the strategic alignment of land uses and urban design features to optimize energy technology performance and to reduce transportation fuel consumption. These include smartgrowth features, and in particular mixed-use and transit-oriented development, as they create spatial conditions enabling the economical use of distributed generation and co-generation energy technologies. However, for the purpose of this section, we will focus on centralized community thermal – combined heating and cooling systems, also known as "district energy systems".

District energy systems contribute to community sustainability and security by maximizing the efficient use of a variety of fuels to co-generate and deliver electricity and thermal energy, locally. Because district energy thermal networks aggregate and link the heating and cooling requirements of dozens or hundreds of buildings, they create a greater scale of thermal energy use in a community that facilitates fuel flexible solutions at a central plant or plants and allow for thermal storage applications that would not otherwise be functionally or economically feasible on an individual building basis. In addition to fossil fuels, district energy systems can utilize a combination of locally available renewable



resources such as municipal solid waste, community wood waste; landfill gas, wastewater facility methane, biomass, geothermal; lake or ocean water and solar energy. District energy systems also improve local economies by increasing energy reliability, stabilizing energy costs, attracting new businesses to the district served by the system, increasing property values and ultimately, by re-circulating energy dollars in the local economy through capital investment, construction and operation and maintenance jobs water and solar energy. District energy systems also improve local economies by increasing energy reliability, stabilizing energy costs, attracting new businesses to the district served by the system, increasing property values and ultimately, by recirculating energy dollars in the local economy through capital investment, construction and operation and maintenance jobs.



Diagrammatic components of a district energy system

The City of Shoreline will be conducting an opportunity study to determine the potential for implementation of district energy in the light rail station subareas and potentially other locations where land uses will be transforming in the future.

### Communications

No data was provided for any of the communication companies' distribution networks. The primary improvement to the system would be undergrounding existing overhead lines when new developments are constructed within the subarea. All communication networks are privately owned entities. Funding to serve future growth would be financed by customer fees within the region. As such, there would not be adverse impacts associated with providing communication services in the future under any of the alternatives.

## **3.7.4 Significant Unavoidable Adverse** Impacts

Increased demand for utilities services and facilities within the subarea would occur under all three alternatives. Though Alternative 3 typically generates the most demand for each utility, improvements would be concentrated between Meridian Avenue N to the west, 5<sup>th</sup> Avenue N to the east, NE 155<sup>th</sup> Street to the north, and 145<sup>th</sup> Street to the south. Alternative 2 generates demand within a much larger area, extending to Aurora Avenue N to the west and NE 165<sup>th</sup> Street to the north, potentially requiring more costly and extensive improvements to accommodate projected growth in the extended subarea. Alternative 1 would produce the least amount of demand generation, requiring little to no improvements outside of the currently planned CIP projects outlined in each utility's comprehensive plan. As the subarea grows in population, households, and businesses, existing utilities will need to upgrade their systems to accommodate future growth.



Growth and change would be expected to occur gradually over many decades under either of the action alternatives. Implementation of full build-out of Alternative 3—Compact Community would take 63 to 98 years. Alternative 2—Connecting Corridors would take 60 to 94 years to reach full build-out. As such, utility service providers would be able to monitor growth and adapt management, services, and facilities to serve increases in demand over time, assuming that funding keeps pace with growth. Given these long timeframes, it is also likely that technological innovations, behavioral changes, and more stringent building and energy codes may also mitigate impacts related to utilities. Energy efficiency may be achieved through combined heat and power systems, the potential use of solar power and/or geothermal, and other applications.

With application of the capital improvement projects proposed by each utility district and upsizing facilities discussed above, along with regulatory requirements, no significant unavoidable adverse impacts would be anticipated.

## **3.7.5 Combined Subarea Improvements** Effect on Infrastructure

The 145<sup>th</sup> Street Station EIS and 185<sup>th</sup> Street Station EIS were analyzed as standalone rezoning alternatives. Depending on which

alternative is selected for each subarea, the resultant zoning policy would have a combined effect on the supporting infrastructure.

#### Water

#### **Seattle Public Utilities**

The Seattle Public Utilities portion of both subareas are within its own 590 Pressure Zone, and fed by the same supply stations, booster pumps, and storage reservoir. Due to the extensive nature of the Seattle Public Utilities water system, a proper analysis could not be performed between the two subareas and connecting appurtenances. Once the desired alternatives have been selected, the hydraulic model should be updated to properly evaluate all supply stations, booster pumps, and reservoirs connected to the system. **Table 3.7-13** provides a side by side analysis of the two study areas water demand rates.



	145th Street	Subarea		-	
	Existing Conditions	Alternative 1	Alternative 2	Alternative 3	
Withdrawal Rate (GPM)	228	269	958	783	
Recommended Storage (MGPD)	0.66	0.78	2.76	2.26	
185th Street Subarea					
	Existing Conditions	Alternative 1	Alternative 2	Alternative 3	Alternative 4
Withdrawal Rate (GPM)	216	244	813	1,644	1,710
Recommended Storage (MGPD)	0.62	0.70	2.34	4.74	4.92

#### Seattle Public Utilities - Combined Subarea Water Demand Analysis Table 3.7-13

#### North City Water District

One concern with the combined effect of both subareas on the existing system is the North City Water District's current approved rate of withdrawal from Seattle Public Utility's Tolt River Transmission Main. The current approved maximum withdrawal rate from the transmission main is 3,300 gallons per minute. **Table 3.7-14** provides a comparison of the two study areas to the maximum withdrawal rate.

This analysis does not include demand from the rest of the North City Water District, which relies on this withdrawal rate as well. Based only on the two subareas, if the highest population density zoning alternatives are selected for both subareas, the North City Water District will have a deficit in their current water withdrawal rate. Seattle Public Utilities has ample capacity to provide more water to the North City Water District, and the peak flow allocation can be revised as needed to meet the growing demand, as the City of Shoreline develops.



Table 3.7-14
North City Water District - Source of Supply
Analysis for Alternatives

North City Water District			
laximum Withdrawal Rate (GPM)			
145th Stree	et Subarea		
Alt 1	Alt 2	Alt 3	
(GPM)	(GPM)	(GPM)	
374	1,338	1,507	
185th Street Subarea			
Alt 1	Alt 2	Alt 3	Alt 4
(GPM)	(GPM)	(GPM)	(GPM)
274	536	1,228	1,846
	thdrawal R 45th Stree Alt 1 (GPM) 374 185th Alt 1 (GPM)	thdrawal Rate (GPM) 45th Street Subarea Alt 1 Alt 2 (GPM) (GPM) 374 1,338 185th Street Suba Alt 1 Alt 2 (GPM) (GPM)	thdrawal Rate (GPM)3,30045th Street SubareaAlt 1Alt 2Alt 1Alt 2(GPM)(GPM)3741,3381,507185th Street SubareaAlt 1Alt 2Alt 1Alt 2(GPM)(GPM)(GPM)(GPM)

Currently, both the 145<sup>th</sup> Street Subarea and 185<sup>th</sup> Street Subarea are within the 590 Pressure Zone, and fed by the same supply stations, booster pumps, and storage reservoir. If the highest population density zoning alternatives are selected for both subareas, all connecting appurtenances will need to be analyzed in conjunction with the demand generated from the surrounding community. If the new pressure zone, 515 is constructed around the 145<sup>th</sup> Street Subarea, the two subareas will no longer be connected, and the only resource used by both communities would be the 3.7-million gallon storage reservoir located near the intersection of 15<sup>th</sup> Avenue NE and NE 177<sup>th</sup> Street. This reservoir currently serves the 615 and 590 pressure zones, and would serve as backup storage for the proposed 515 Pressure Zone. The reservoir would still need to supply standby storage of two times the average daily demand for all three pressure zones. **Table 3.7-15**  contains a comparison of maximum available storage within the reservoir to two times the average daily demand for both subareas under each scenario. Based on this information, the storage reservoir may be undersized for full build-out of the highest population density zoning alternative selected for both subareas.

North City	North City Water District Available				
Effective	ive Storage (Millions of				
	Gallons) <sup>1</sup>			3.7	
145th St	reet Subare	a - Average	Daily	/	
	Deman	d x 2			
Existing					
Conditions	Alt 1 -	Alt 2 -	Alt	3 -	
- 2 x ADD	2 x ADD	2 x ADD	2 x /	ADD	
(MGPD) <sup>2</sup>	(MGPD)	(MGPD)	(MC	GPD)	
0.72	1.08	3.85	4.	34	
185th Str	eet Subarea	a - Average	Daily	Dema	ind x 2
Existing					
Conditions	Alt 1 -	Alt 2 -	Alt	3 -	Alt 4 -
- 2 x ADD	2 x ADD	2 x ADD	2 x /	ADD	2 x ADD
(MGPD)	(MGPD)	(MGPD)	(Me	SPD)	(MGPD)
0.72	0.79	1.54	3.	54	5.32

#### North City Water District - Standby Storage Analysis Table 3.7-15

 Effective Storage was taken as the entire volume of the 3.7 million gallon reservoir, assuming nested standby and fire suppression storage, and not factoring in equalizing storage for the purposes of this report.

2.) Million Gallons Per Day (MGPD)

#### Wastewater

The primary concern with the combined effect of both subareas on the existing system is a possible lack of carrying capacity of the prime trunk main collecting wastewater from both subareas. The majority of the 185<sup>th</sup> Street and 145<sup>th</sup> Street subareas collect wastewater within basins 16, 17, and 18. The trunk main begins at NE 175<sup>th</sup> Street and Meridian Avenue N in the 185<sup>th</sup> Street subarea, as a 24" diameter pipe, collecting wastewater from as far north as NE 190<sup>th</sup> Street, as far west as Ashworth Avenue N, and as far east as 15<sup>th</sup> Avenue NE. This trunk main continues south along Meridian Avenue N, Corliss Avenue N, and along the I-5 Corridor, collecting wastewater from a large portion of the City of Shoreline as it heads south. The trunk main turns into a 30" main at the intersection of NE 155<sup>th</sup> Street and I-5, as it enters the 145<sup>th</sup> Street Subarea. **Table** 3.7-16 provides a comparison of the estimated peak flow (4 x average daily demand) for the two subareas entering this trunk main.

Table 3.7-16
Ronald Wastewater - Basin #23 Combined Subarea Peak
Wastewater Estimated Flow Analysis

145th Street Subarea				
Existing				
Conditions	Alt 1	Alt 2	Alt 3	
(CFS)	(CFS)	(CFS)	(CFS)	
3.04	3.96	14.36	13.38	
185th Street Subarea				
Existing				
Conditions	Alt 1	Alt 2	Alt 3	
(CFS)	(CFS)	(CFS)	(CFS)	Alt 4 (CFS)
2.24	2.50	3.93	11.70	13.58

This analysis does not include demand from the rest of sewer collection basins, which drain into this trunk main. Based only on the two subareas, if the highest population density zoning alternatives are selected for both subareas, the Ronald Wastewater District may need to upsize a large portion of this pipe. Additionally, this pipe is owned and operated by King County once it crosses south of NE 145<sup>th</sup> Street. SPU will need to evaluate the capacity of this pipe once it enters their system, based on the projected demand from the selected alternatives.



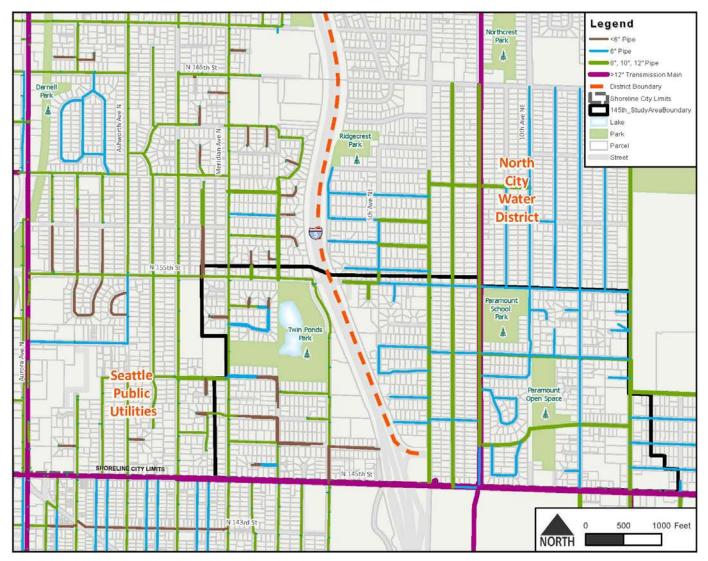


Figure 3.7-1 Existing Water Facilities in the Subarea



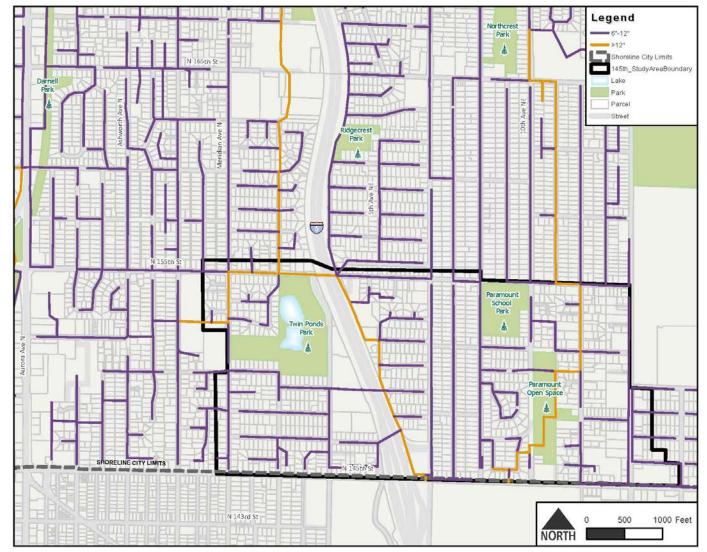


Figure 3.7-2 Existing Wastewater Facilities in the Subarea



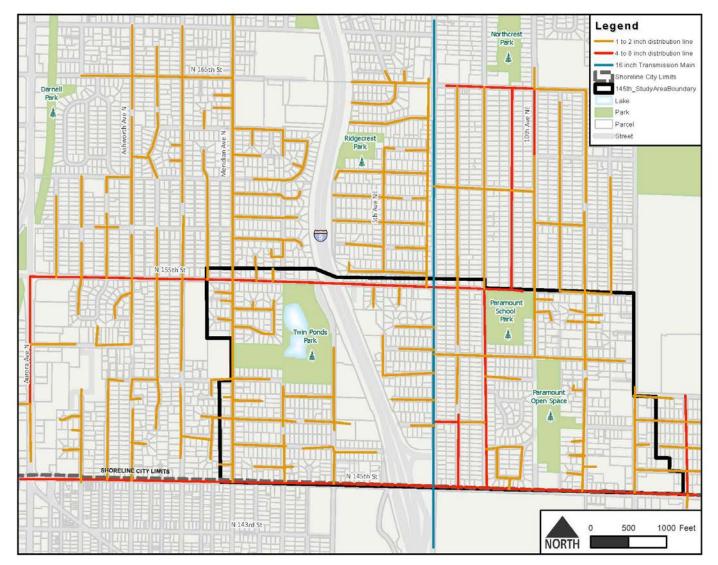


Figure 3.7-3 Existing Natural Gas Facilities in the Subarea



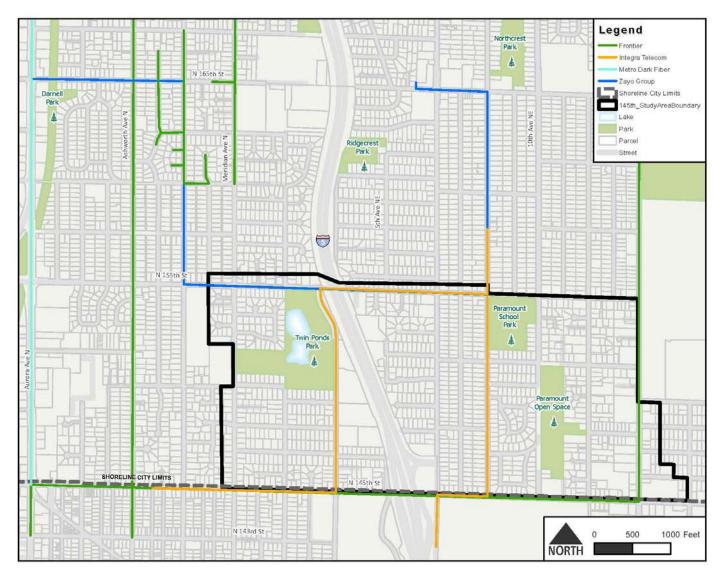


Figure 3.7-4 Existing Communications Facilities in the Subarea



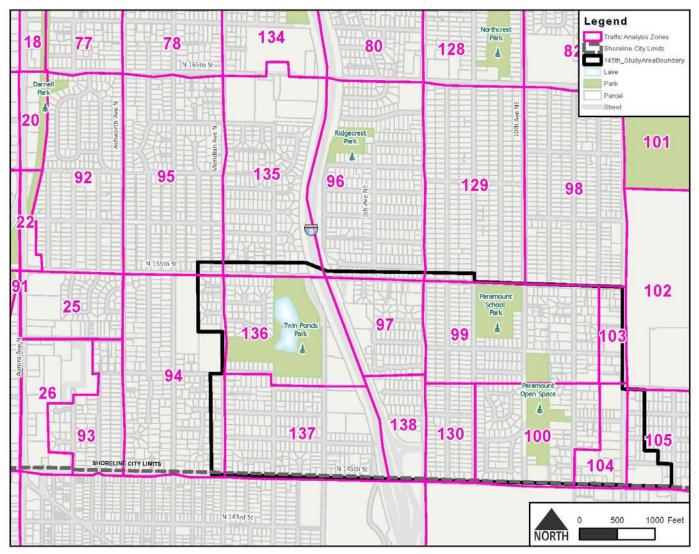


Figure 3.7-5 Traffic Analysis Zones (TAZs) in the Subarea



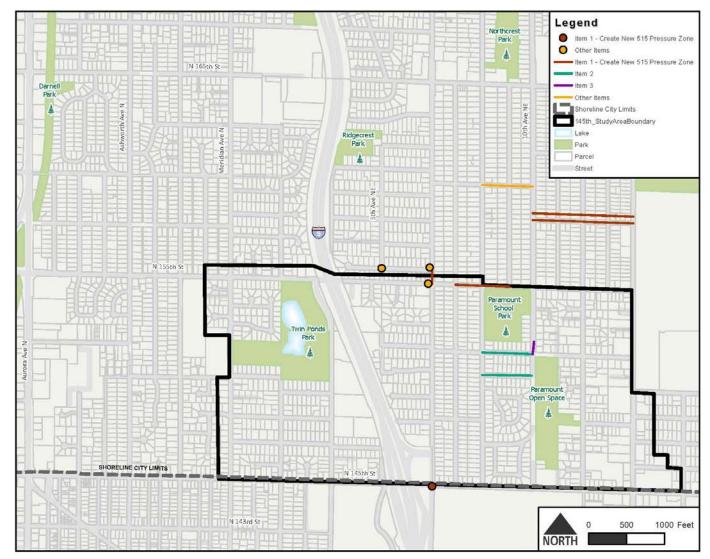


Figure 3.7-6 Planned Water Improvements in the Vicinity of the Subarea



SHORELINE

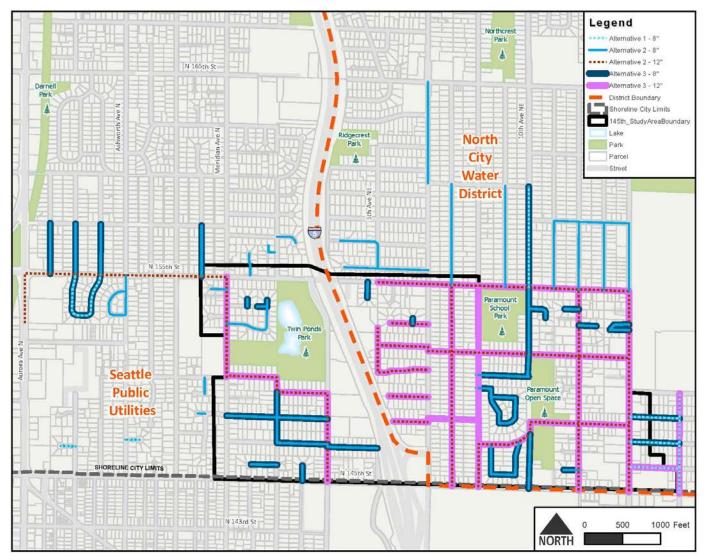


Figure 3.7-7 Other Recommended Future Water Improvements for Mitigation of the Action Alternatives



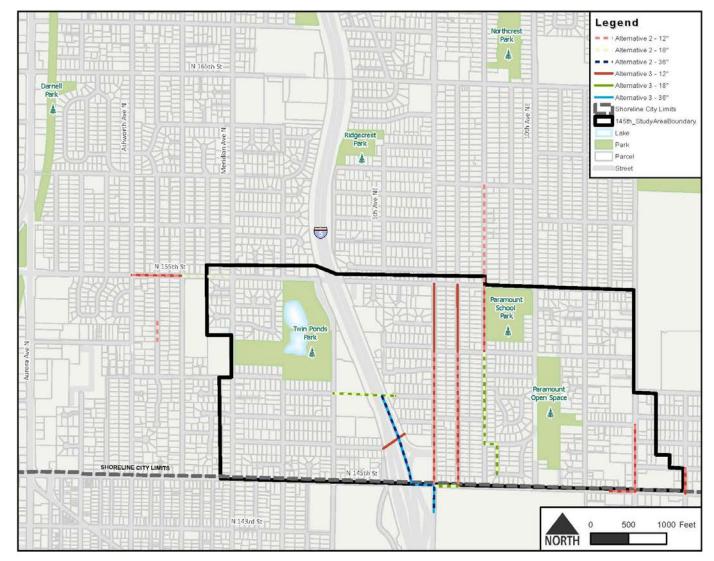


Figure 3.7-8 Recommended Future Wastewater Improvements for Mitigation of the Action Alternatives



## Chapter 4

References DRAFT ENVIRONMENTAL IMPACT STATEMENT



## **Chapter 4—References**

The following references were cited and consulted in the development of the Draft Environmental Impact Statement (DEIS) for the 145<sup>th</sup> Street Station Subarea Planned Action, including printed and Internet references as well as personal communications. Personal communications occurred through phone calls, emails, or in person meetings documented by notes.

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Zayo Group. 2014. *Explore Our Network Map*. Available: <u>http://www.zayo.com/network/interactive-map</u>. Accessed: April 21, 2014.

### 4.2 Personal Communications

- Clark, Jay. GIS Technician. Administrative Services. City of Shoreline. October 27, 2014 – email GIS data of utilities operating within the City of Shoreline.
- Clayton, Eric. Senior OSP Engineer. Integra Telecom. December 17, 2014 – email data from Integra telecom's service network.
- Clouse, Denny. Operations Manager. North City Water District. April 10, 2014 – phone conversation regarding North City Water District distribution network and fire flow demands.
- Derrick, Michael. General Manager. Ronald Wastewater District. October 6, 2014 – interview regarding Draft EIS Report comments at Ronald Wastewater District Office.
- Fallt, Jeremy. Network Engineer. Frontier Communications.
   December 16, 2014 email data from Frontier
   Communications' service network.
- Ford, P.E., Jon. Senior Water System Engineer. Seattle Public
   Utilities. April 15, 2014 & May 14, 2014 email data from
   Seattle Public Utilities 2012 ADD Fire Flow in Shoreline:

August 30, 2012, and email regarding planned projects related to the subarea.

- Griffith, Lisa, Municipal Construction Manager. Puget Sound Energy. November 5, 2014 – email regarding natural gas services and planned PSE projects related to the subarea.
- Pottinger, PE, Dianne. District Manager. North City Water
  District. October 6, 2014 interview regarding Draft EIS
  Report comments at North City Water District Office.
  December 12, 2014 email regarding CIP Projects in subarea
  and questions on new 515 Pressure Zone.
- Putnam, Clayton. Planner GIS/IT Analyst. Planning & Development Department. Ronald Wastewater District. May
  9, 2014 – email Ronald Wastewater District GIS Data. May
  14, 2014 – phone conversation regarding services and planned projects related to the subarea.
- Stiles, Vicki. Executive Director. Shoreline Historical Museum. December 10 & 11, 2014 – emails with attachments containing Shoreline neighborhood history.

## Chapter 5

Distribution List DRAFT ENVIRONMENTAL IMPACT STATEMENT



## **Chapter 5—Distribution List**

A notice of availability, compact disk, or copy of the Draft Environmental Impact Statement (DEIS) was sent to the following entities. A notice of availability also was published in the City's newspaper of record, the Seattle Times, and emailed to 145<sup>th</sup> Station Citizens Committee (145SCC) stakeholder list. Refer to the FACT SHEET at the beginning of the DEIS for how to access this DEIS online, obtain a compact disk, or copy of the DEIS.

## 5.1 Federal Agencies

National Marine Fisheries Service (Division of the National Oceanic and Atmospheric Administration and the US Department of Commerce)

US Army Corps of Engineers

## 5.2 Tribes

Muckleshoot Indian Tribe, Fisheries Division

**Tulalip Tribes** 

**Tribal Council** 

Natural Resources Division

## 5.3 State, Regional, and County Agencies and Organizations

**Community Transit** 

Energy Facility Site Evaluation, Stephen Posner

King County Department of Development and Environmental Services

King County Historic Preservation Office, Director's Office, Department of Natural Resources and Parks

King County METRO

King County, Transit Division, Environmental Planning and Real Estate

Puget Sound Clean Air Agency

Puget Sound Partnership

Puget Sound Regional Council

Sound Transit, SEPA Responsible Official

Snohomish County, Planning and Development Services

Washington State Department of Archaeology and Historic Preservation

Washington State Department of Commerce

Washington State Department of Ecology, SEPA Unit



#### 145th Street Station Subarea Planned Action

Washington State Department of Ecology, Critical Areas Coordinator, Shorelands, Environmental Assistance Program

Washington State Department of Fish and Wildlife

Washington State Department of Health, Environmental Health Division

Washington State Department of Health, Northwest Region, Drinking Water Operations

Washington State Department of Natural Resources, SEPA Center

Washington State Department of Transportation, Northwest Region

## 5.4 Public Services, Institutions, and Utilities

**Comcast Cable** 

King County, Department of Permitting and Environmental Review, SEPA Official

King County, Wastewater Treatment Division, Environmental Planning—OAP

North City Water District

Recology CleanScapes, Inc., Chief Operating Officer

Ronald Wastewater District

Seattle City Light

Seattle/King County Health Department, SEPA Responsible Official

Seattle Public Utilities, SEPA Coordinator

Shoreline Fire Department

Shoreline Police Department

Shoreline Libraries (Locations on 175<sup>th</sup> and in Richmond Beach, King County Library System)

Shoreline School District, Capital Projects Director

Shoreline Water District

## 5.5 Community and Special Interest Groups and Organizations

145<sup>th</sup> Street Station Citizens Committee (145SCC)

185<sup>th</sup> Street Station Citizens Committee (185SCC)

Neighborhood Associations:

Ballinger Neighborhood Association

Briarcrest Neighborhood Association\*

Echo Lake Neighborhood Association

Highland Terrace Neighborhood Association



The Highlands

Hillwood Community Network

Innis Arden Club, Inc.

Meridian Park Neighborhood Association

North City Neighborhood Association

Parkwood Neighborhood Association\*

Richmond Beach Neighborhood Association

Richmond Highlands Neighborhood Association

**Ridgecrest Neighborhood Association\*** 

Westminster Triangle Network

\* Denotes neighborhoods that are partially located within or are bordering the 145<sup>th</sup> Street Station Subarea.

Thornton Creek Alliance

Thornton Creek Legal Defense Fund (c/o Attorneys Paul A Kampmeier Smith & Lowney, PLLC)

## 5.6 Adjacent and Neighboring Jurisdictions

City of Bothell, Department of Community Development SEPA Responsible Official

City of Edmonds, Development Services, SEPA Responsible Official

City of Kenmore, Department of Community Development, SEPA Responsible Official

City of Lake Forest Park, Planning and Building Department, SEPA Responsible Official

City of Lynnwood, Department of Community Development, SEPA Responsible Official

City of Mountlake Terrace, Planning and Systems, SEPA Responsible Official

City of Seattle, Department of Planning and Development

Town of Woodway, City Clerk

## 5.7 City Officials, Commissions, and Departments

City Council

City Hall

City Leadership Team/Department Directors

Shoreline Library and Library Board

Parks, Recreation and Cultural Services Board

**Planning Commission** 

Tree Board



## Appendix

#### **APPENDIX CONTENTS:**

- Acronyms
- Glossary
- Public and Stakeholder Involvement Information
- Scoping Notice

145th Street Station Subarea Planned Action DRAFT ENVIRONMENTAL IMPACT STATEMENT



# Appendix

## 145<sup>th</sup> Street Station Subarea Planned Action Draft Environmental Impact Statement

### **Appendix Contents:**

- Acronyms
- Glossary
- Public and Stakeholder Involvement Information
- Scoping Notice

## Acronyms

ADA	Americans with Disabilities A	ct
ADA	Americans with Disabilities A	ct

- ADT Average Daily Traffic
- ADU Accessory Dwelling Unit
- AMI Area Median Income
- BMP Best Management Practices
- BAT Bus Access and Transit
- BRT Bus Rapid Transit
- BTU British Thermal Unit
- CB Community Business (Existing Zoning Category)
- cfs Cubic Feet per Second
- CIP Capital Improvement Program
- **CPPs Countywide Planning Policies (King County)**
- **CPTED** Crime Prevention through Environmental Design
- CRA Community Renewal Areas
- DEIS Draft Environmental Impact Statement
- DNS Determination of Nonsignificance
- DS Determination of Significance
- DSHS Washington Department of Social and Health Services
- EIS Environmental Impact Statement
- EPF Essential Public Facilities
- ERU Equivalent Residential Unit (or REU)
- FAR Floor Area Ratio
- FEIS Final Environmental Impact Statement

- FSS Fire Suppression System
- GIS Geographic Information System
- GMA Growth Management Act
- GMPC Growth Management Planning Council
- gpd Gallons per Day
- gpm Gallons per Minute
- HOV High Occupancy Vehicle
- IPCC International Panel on Climate Change
- ITE Institute of Transportation Engineers
- LEED Leadership in Energy and Environmental Design
- LID Low Impact Development or Local Improvement District (depending on context)
- LOS Level of Service
- MDD Maximum Daily Demand
- MG Million Gallons
- mgd Million Gallons per Day
- MRSC Municipal Research and Services Center of Washington
- MUP Master Use Permit (Potential New Zoning Category)
- MUR Multi-Residential (Potential New Zoning Category)
- MUTCD Manual on Uniform Traffic Control Devices
- MOU Memorandum of Understanding
- NACTO National Association of City Transportation Officials
- NB Neighborhood Business (Existing Zoning Category)
- NPDES National Pollutant Discharge Elimination System
- PCD Planning & Community Development
- PROS Parks, Recreation, and Open Space Plan



#### 145th Street Station Subarea Planned Action

PSE	Puget Sound Energy
PSRC	Puget Sound Regional Council
ΡΤΕ	Property Tax Exemption
R-6	Residential, 6 Units per Acre (Existing Zoning Category)
R-8	Residential, 8 Units per Acre (Existing Zoning Category)
R-12	Residential, 12 Units per Acre (Existing Zoning Category)
R-18	Residential, 18 Units per Acre (Existing Zoning Category)
R-24	Residential, 24 Units per Acre (Existing Zoning Category)
R-48	Residential, 48 Units per Acre (Existing Zoning Category)
RCW	Revised Code of Washington
RWD	Ronald Wastewater District
SCL	Seattle City Light
SEPA	State Environmental Policy Act
SMC	Shoreline Municipal Code
SOV	Single occupant vehicle
SPU	Seattle Public Utilities
SWD	Shoreline Water District
SWM	Surface Water or Stormwater Management
SWMP	Surface Water or Stormwater Management Plan
SWPPP	Surface Water Pollution Protection Plan
ST	Sound Transit
тс	Town Center (Existing Zoning Categories:
	TC-1, TC-2, TC-3, or TC-4)
TDM	Transportation Demand Management
ТІР	Transportation Improvement Plan
тос	Transit Oriented Communities

TOC Transit-Oriented Communities

TOD Transit-Oriented Development

TDR Transfer of Development Rights

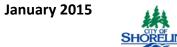
TMP Transportation Master Plan

VoIP Voice over Internet Protocol

VMT Vehicle Miles Traveled

WAC Washington Administrative Code

WSDOT Washington State Department of Transportation



## Glossary

Many of the definitions of terms in this glossary are from the City of Shoreline Comprehensive Plan Some definitions have been adapted and edited slightly to focus on specific relationship to the 145<sup>th</sup> Street Station Subarea Planned Action Environmental Impact Statement. If definitions are not from the Comprehensive Plan, the source is listed. These definitions are for reference purposes to assist the review of the DEIS. These definitions are not intended to be used for regulatory purposes.

#### Absorption

In a real estate development context, absorption refers to the amount of increase in occupied commercial space or residential units which occurs in a given market area over a specified time period. Negative absorption means vacancies are occurring faster than new occupancies.

#### Access Time

The time required to walk, bicycle, or drive from the origin of the trip (for example, from home) to a (boarding) transit stop, plus the waiting time based on the frequency of transit service, and/or the transfer time and the walking or driving time from the transit (de-boarding) stop to the destination. For automobile trips, it is the time required to walk to and from parking places, and delays within parking facilities, if any.

#### Accessibility

Related to transportation: the ease by which an individual can reach desired activities in any location by use of the transportation system. Accessibility is also a frequent term used in conjunction with Americans with Disabilities Act (ADA) considerations. Calling a public facility "accessible" typically means it complies with ADA standards.

#### Accessory Dwelling Unit (ADU)

A separate, complete dwelling unit attached to or contained within the structure of the primary dwelling, or contained within a separate structure that is accessory to the primary dwelling unit on the premises.

#### **Adequate Public Facilities**

Facilities that have the capacity to serve development without decreasing levels of service below locally established minimums. *Source: Washington State Growth Management Act definitions* 

#### Affordable Housing

Housing that is affordable for a family which earns 80 percent or below of the area median income (AMI). Housing costs, including utility costs, must comprise no more than 30 percent of gross family income in order to be considered affordable. For example, the 2011 AMI for Shoreline was \$66,476. Therefore, a household with that income would be making 100 percent of median; a household that made 50% of that amount (\$33,238) would be classified at 50 percent AMI; a family making 30 percent of that amount (\$19,943) would be classified at 30% AMI. Families who pay more than 30 percent of their income for housing are considered "cost-burdened" and may have difficulty affording necessities such as food, clothing, transportation, and medical care.

#### Alighting

Term describing the departure of passengers from a bus or transit vehicle. *Source: Lynnwood Link Extension DEIS* 

#### Alignment

Horizontal geometric elements, which define the location of the light rail track or roadway. *Source: Lynnwood Link Extension DEIS* 

#### **Allowed Densities**

Allowed densities mean that the density, expressed in dwelling units per acre, allowed under a county's or city's development regulations when considering the combined effects of all applicable development regulations. *Source: Washington State Growth Management Act definitions* 

#### Alternatives

State Environmental Policy Act (SEPA) rules mandate consideration of a range of reasonable alternatives that could feasibly attain the proposal's objective, and that are within a jurisdictional agency's authority to



control. Alternatives are possible options or scenarios studied in an environmental impact statement. *Source: Adapted from the SEPA Handbook, Washington State Department of Ecology* 

#### **Amenity Zone**

Area adjacent to the street curb where a variety of elements may be located, such as street trees, landscaping, furnishings (benches, trash receptacles, etc.), utility poles, light poles, signs, and other features. This area can vary in width but generally should be a minimum of 4 feet wide.

#### Arterial

A major thoroughfare used mainly for through traffic rather than access to adjacent property. Arterials generally have greater traffic-carrying capacity than collector or local streets and are designed for continuously moving traffic. *Source: Lynnwood Link Extension DEIS* 

#### Average Daily Traffic (ADT)

The total volume of traffic during a given time period divided by the number of days in that time period, representative of average traffic in a one-day time period. *Source: Lynnwood Link Extension DEIS* 

#### **Best Management Practices (BMPs)**

Defined by the Washington State Department of Ecology as physical, structural, and/or managerial practices that, when used singly, or in combination, prevent or reduce pollution of water. Types of BMPs include source control, runoff treatment, streambank erosion control, and other activities.

#### Bike Lane

A Bike Lane is defined as a portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists. Bike lanes enable bicyclists to ride at their preferred speed without interference from prevailing traffic conditions and facilitate predictable behavior and movements between bicyclists and motorists. A bike lane is distinguished from a cycle track in that it has no physical barrier (medians, raised curbs, etc.) that restricts the encroachment of motorized traffic. Conventional bike lanes run curbside when no parking is present, adjacent to parked cars on the right-hand side of the street or on the left-hand side of the street in specific situations. Bike lanes typically run in the same direction of traffic, though they may be configured in the contra-flow direction on low-traffic corridors necessary for the connectivity of a particular bicycle route. *Source: National Association of City Transportation Officials* (NACTO)

#### **Bike-Shed/Bicycle-Shed Analysis**

Similar to a "walk-shed" analysis, a bike-shed or bicycle-shed analysis evaluates the amount of time it takes people to bicycle to and from a high-capacity transit station or other origin/destination within a planning area (such as a station area/subarea). For example, a bikeshed analysis might show routes that could be traveled within 15 minutes to/from the station within a defined geographic area or travel shed. A typical speed of travel would be assumed for travel ways, usually 7 miles per hour for bicycle travel in urban areas. The analysis also typically includes time periods of delay at intersections and crossings. *Source: Otak, Inc.* 

#### **Bioretention Facility**

A shallow landscaped depression with an engineered soil mix designed to filter runoff from a small contributing area, which can be in the form of a swale or cell; also often referred to as a rain garden. *Source: Lynnwood Link Extension DEIS* 

#### Boarding

Term describing the arrival of passengers onto a bus or transit vehicle. *Source: Lynnwood Link Extension DEIS* 

#### **Build-Out**

Hypothetical development of all parcels to the maximum extent allowed under current zoning.

#### Buffer

In a general planning context: transitional land uses of intermediate or low development intensity, open spaces, landscaped areas, fences, walls, berms or any combination thereof used to physically separate or

January 2015



screen one use or property from another so as to visually shield or block noise, lights, or other nuisances. In an ecological context: a designated area contiguous to a critical area intended to protect the critical area or protect people and property from a hazard associated with the critical area.

#### **Bus Rapid Transit**

Bus rapid transit (BRT) is a term applied to public transportation systems using buses with enhanced amenities and with systems that provide faster, more efficient service than an ordinary bus line. Often this is achieved by making improvements to existing infrastructure, vehicles, and scheduling.

#### **Capital Facilities**

Structures, improvements, equipment, or other major assets, including land, which are provided by and for public purposes and services.

#### Capital Improvement Program/Plan (CIP)

Allocation of funds from various revenue sources for the development of capital facilities: to build needed roadways; to protect investment in existing buildings; to protect the health of citizens; to enhance the management of natural resources; to provide necessary capital resources for law, safety, and justice system; and to improve cultural and recreational opportunities for Shoreline citizens. Shoreline's CIP is a multi-year plan for capital expenditures needed to restore, improve, and expand infrastructure, which includes roads, sidewalks, trails, drainage, parks, and buildings owned and/or maintained by the City. The CIP details the work to be done for each project and an expected timeframe for completion. The CIP typically has a short-range planning horizon, six years for example. The CIP identifies projects and equipment purchases to be made, provides a planning schedule, and identifies options for financing the plan.

#### **Carbon Emissions/Greenhouse Gas Emissions**

Carbon emissions are a type of greenhouse gas emitted into the atmosphere produced by vehicles and industrial processes. *Source: Web Dictionary* 

#### Channelization



The use of traffic markings or islands to direct traffic into certain paths; for example, a "channelized" intersection directs portions of traffic into a left turn lane through the use of roadway islands or striping that separates the turn lane from traffic going straight. *Source: Lynnwood Link Extension DEIS* 

#### Circulation

The free movement or passage of a vehicle, pedestrian, bicycle, or other transportation mode through a given area. *Source: Lynnwood Link Extension DEIS* 

#### **Clustering/Cluster Development**

Land development, such as in a subdivision that reduces the individual lot areas to create permanent open space or a reserve for future development while maintaining the overall zoned residential density; also may include clustering of buildings in a more compact area on one larger parcel to preserve open space on the site.

#### **Commute Trip**

A trip made from an employee's residence to a work site with a regularly scheduled weekday arrival time of 6:00 a.m. to 9:00 a.m.

#### **Commute Trip Reduction Act**

State legislation enacted in 1991 and incorporated into the Washington Clean Air Act. The law establishes goals for the reduction of commute trip vehicle miles traveled by the employees of large employers.

#### **Complete Streets**

Complete Streets are designed and operated to enable safe access for all users and all modes.

#### **Comprehensive Plan**

The Growth Management Act (GMA) requires certain cities and counties of Washington State to adopt comprehensive land use plans. A comprehensive plan is a generalized, coordinated land use policy statement of the governing body of a county or city that is adopted pursuant to the GMA. A comprehensive plan consists of a map or maps, and descriptive text covering objectives, principles, and standards. Each comprehensive plan includes goals and policies for land use, housing, capital facilities, utilities, transportation, and the natural environment. Optional components include elements relating to economic development, community design, conservation, solar energy, recreation, and subarea plans. According to the GMA, the comprehensive plan must provide for adequate capacity to accommodate the city's share of projected regional growth. It must also ensure that planned and financed infrastructure can support planned growth at a locally acceptable level of service.

#### **Concurrency/Concurrency Management System**

The Growth Management Act requires jurisdictions to adopt and enforce ordinances that prohibit development approval if the development causes the level of service on a transportation facility to decline below the standards adopted in the comprehensive plan, unless transportation improvements or strategies to accommodate the impacts of development are made "concurrent" with the development. Concurrent with development means that transportation improvements or strategies are in place at the time of development or that financial commitment is made to complete the improvements or strategies within six years. The Concurrency Management System of King County establishes a process to manage new development based on transportation impacts on levels-of-service and the concurrency of needed improvements or actions. Communities may also establish concurrency for capital facilities, utilities, and other public services.

#### **Conservation Easement**

A permanent legal restriction, requirement, or condition placed on the use or management of real property. Conservation easements are put in place by a landowner, but run with the title to the land and transfer to future owners. This tool can be used to preserve open space.

#### Consistency

Consistency means that no feature of a plan or regulation is incompatible with any other feature of a plan or regulation. Consistency is indicative of a capacity for orderly integration or operation with other elements in a system.

#### **Contiguous Development**

Development of areas immediately adjacent to one another.

#### Conveyance System—Drainage

Facilities, both natural and built, that collect, contain, and provide for the flow of surface and storm water from the highest points on the land down to a receiving water. The natural elements of the conveyance system include swales and small drainage courses, streams, rivers, lakes, and wetlands. The built elements of the conveyance system include gutters, ditches, pipes, channels, and most retention/detention facilities.

#### Coordination

Consultation and cooperation among jurisdictions.

#### **Corner Lot**

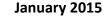
A lot situated at the intersection of and fronting on two or more public street rights-of-way.

#### **Cottage Housing or Clustered Housing**

Detached single-family housing that has the following characteristics: 1) each unit is of a size and function suitable for a single person or small family; 2) each unit has the construction characteristics of a single family house; 3) the density of clustered housing is typically 7 to 14 units per acre but may be up to 18 units per acre or higher depending on the overall parcel szie; 4) all units are located on a commonly owned piece of property and may have shared amenities (i.e. party room, tool shed, garden, orchard, workshop, parking areas; 5) the site is designed with a coherent concept in mind, including: shared functional open space, off-street parking, access within the site and from the site, and consistent landscaping.

#### **Countywide Planning Policies (CPPs)**

The Growth Management Act requires that counties, as regional governments within their boundaries, prepare countywide planning policies that establish a countywide framework from which county and city comprehensive plans are to be developed and adopted. This framework is to ensure that city and county comprehensive plans are





consistent. The "King County Countywide Planning Policies" were developed and recommended by the Growth Management Planning Council to serve as a blueprint for how King County and its cities should grow over the next 20 years. The Metropolitan King County Council adopted these policies in 1992. Since this time, amendments called "Phase II Countywide Planning Policies" have been made to the sections pertaining to affordable housing, economic development, and rural character. The County Council has adopted these Phase II amendments.

#### **Crime Prevention through Environmental Design**

Crime Prevention through Environmental Design (CPTED) is a multidisciplinary approach to deterring criminal behavior through environmental design. CPTED strategies rely upon the ability to influence offender decisions that precede criminal acts, and focus on the built environment.

#### **Critical Areas**

Areas that are ecologically important, generally unsuitable for development, and highly susceptible to negative environmental impacts. Critical areas include: critical aquifer recharge areas, geologically hazardous areas, frequently flooded areas, streams, wetlands, and fish and wildlife habitat conservation areas. These individual critical areas are defined in the Shoreline Municipal Code Title 20 (Development Code).

#### **Cultural Resources**

Cultural resources is a term used interchangeably with "lands, sites, and structures, which have historical or archaeological and traditional cultural significance." (See Historic Preservation.)

#### Culverts

A pipe or concrete box structure that conveys water from open channels, swales, or ditches under a driveway, roadway, fill soil, or surface structure.

#### Cumulative

Increasing or enlarging by successive addition. Impacts resulting from a series of actions or events that individually would have less effect or no noticeable effect.

#### **Cycle Track**

A cycle track is an exclusive bike facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A cycle track is physically separated from motor traffic and distinct from the sidewalk. Cycle tracks have different forms but all share common elements—they provide space that is intended to be exclusively or primarily used for bicycles, and are separated from motor vehicle travel lanes, parking lanes, and sidewalks. In situations where on-street parking is allowed cycle tracks are located to the curbside of the parking (in contrast to bike lanes).

Cycle tracks may be one-way or two-way, and may be at street level, at sidewalk level, or at an intermediate level. If at sidewalk level, a curb or median separates them from motor traffic, while different pavement color/texture separates the cycle track from the sidewalk. If at street level, they can be separated from motor traffic by raised medians, on-street parking, or bollards. By separating cyclists from motor traffic, cycle tracks can offer a higher level of security than bike lanes and are attractive to a wider spectrum of the public. *Source: National Association of City Transportation Officials (NACTO)* 

#### Density

The number of housing units (also dwelling units) per acre.

#### **Density Incentives/ Bonuses**

Additional units exceeding the number of units permitted on a site by zoning (sometimes referred to as "base density") in exchange for public benefits provided by the developer. King County has incorporated use of density incentives with standard urban subdivision, mobile home park, and multifamily development projects (King County Code, Title 21A).



#### **Development and Redevelopment**

An area that is developed as a tract of land with built structures. Redevelopment typically refers to development that converts an older, previously developed area into a new use or development.

#### **District Energy**

District energy systems, also called community energy systems, produce electricity, hot water, steam, and/or chilled water at a central plant or series of plants and then distribute the energy through underground pipes and wires to adjacent buildings connecting to the system. Electricity is used to energize lights, appliances, equipment, and machinery, while hot and chilled water and steam are used for space heating and cooling and a variety of commercial and processing needs. From a sustainability standpoint, district energy systems are typically more efficient, less costly, and result in less greenhouse gas emissions than conventional energy systems. *Source: National Energy Center for Sustainable Communities* 

#### **Domestic Water System**

A domestic water system means any system providing a supply of potable water which is deemed adequate pursuant to RCW <u>19.27.097</u> for the intended use of a development.

#### Drainage

Collection, conveyance, containment, and/or discharge of surface and stormwater runoff.

#### **Drainage Basin**

A sub-unit of a watershed that is defined by hydrology and topography. An area that drains to common outlet or an identifiable water body, such as a creek, wetland, river, or stream. In King County, 72 drainage basins are contained with 6 major watersheds.

#### Duplex

A building containing two complete dwelling units. Depending on how they are configured, duplexes are considered single family attached dwellings or multifamily dwellings. Accessory Dwelling Units are not considered duplexes.

#### **Dwelling Unit**

A unit that accommodates one household. The unit can be a singlefamily house, an accessory dwelling unit, or one unit of a duplex, triplex, townhome, apartment building, or condominium. The growth targets in King County are measured in dwelling units.

#### EcoDistrict

Ecodistricts are neighborhoods or districts with a broad commitment to accelerate neighborhood scale sustainability. EcoDistricts commit to achieving ambitious sustainability performance goals, guiding district investments and community action, and tracking the results over time.

#### **Ecological Function**

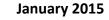
Physical, chemical, and biological processes or attributes of a species, habitat, or ecosystem. For example, the ecological functions of wetlands include food chain support, water quality maintenance, flood storage, and wildlife habitat.

#### **Environmental Impact Statement**

An environmental impact statement (EIS) is a document that includes analysis of probable significant adverse environmental impacts of a proposal, reasonable alternatives, and possible mitigation measures. An EIS is prepared when the lead agency has determined a proposal is likely to result in significant adverse environmental impacts. A draft environmental impact statement (DEIS) is developed and issued for public and agency comment with initial analysis of alternatives and potential impacts. Then, a final environmental impact statement (FEIS) is developed and issued to respond to comments and address any additional analysis that may be needed. The FEIS documents the decision for the proposed action. *Source: Adapted from the SEPA Handbook and SEPA Glossary of Terms, Washington State Department of Ecology* 

#### **Essential Public Facility**

Facilities that are typically difficult to site, such as airports, state education facilities, and state or regional transportation facilities as defined in RCW 47.06.140, state and local correctional facilities, solid waste handling facilities; and in-patient facilities, including substance





abuse facilities, mental health facilities, group homes, and secure community transition facilities as defined in RCW 71.09.020 (RCW 36.70A.200).

#### **Fair Housing Ordinance**

King County's Fair Housing Ordinance prohibits housing discrimination against persons on the basis of race, color, religion, national origin, age, sex, marital status, parental status, use of subsidy (Section 8), sexual orientation, disability or the use of a trained service animal.

#### Floor Area Ratio (FAR)

A ratio which expresses the relationship between the amount of gross floor area permitted in a structure to the area of the lot on which the structure is located. The FAR is the gross floor area of all buildings and structures on a lot divided by the total area of the site/lot/parcel.

#### Flow

When used in reference to surface water management, this term refers to the rate of water discharged from a source expressed in cubic feet of water per minute.

#### **Front Yard Setback**

The required minimum distance separating a building from the public street right-of-way or the edge of a sidewalk which extends beyond a right-of-way, whichever is closer.

#### **Green Streets**

City rights-of-way that are designed to serve as vehicular facilities to provide a citywide system that links parks, open spaces, recreation areas, trails, schools, and shopping areas. Green streets are intended to accommodate bicycle and pedestrian travel with more emphasis on streetscape design, including generous sidewalks separated from the vehicular lanes by landscaping, and wide vehicle lanes or striped bicycle lanes that provide safe bicycle use. Green Streets may also incorporate drainage facilities for improving water quality and landscape treatments designed to enhance or restore natural habitat. They can transform impervious street surfaces into landscaped green spaces that capture stormwater runoff and let water soak into the ground as plants and soil filter pollutants. Green Streets convert stormwater from a waste directed into a pipe, to a resource that replenishes groundwater supplies. Green streets can create attractive streetscapes and urban green spaces, provide natural habitat, and help connect neighborhoods, schools, parks, and business districts.

#### **Growth Management Act (GMA)**

In 1990, the Washington State Legislature passed the State Growth Management Act (ESHB 2929). The Act calls for urban counties and cities in the state to develop comprehensive plans to guide growth management decisions for at least the next decade. Amendments to the Act in 1991 require that counties, working with the cities within their boundaries, develop Countywide Planning Policies to provide a common vision of the future to serve as the framework for all comprehensive plans throughout the county.

#### Growth Management Planning Council (GMPC)

Established by an interlocal agreement, this is a 15-member council of elected officials from Seattle, suburban cities, and King County. The GMPC has been responsible for the preparation and recommendation of the Countywide Planning Policies to the Metropolitan King County Council, which then adopts the policies and sends them to the cities for ratification.

#### **Growth Targets**

The Growth Management Act and the Countywide Planning Policies require King County and its cities to plan for a 20-year population and employment growth target for each jurisdiction, based on designation of the Urban Growth Area, Urban Centers, and the criteria of the Countywide Planning Policies.

#### Habitat

The environments in which organisms normally live; habitat components include food, water, cover (security, breeding, thermal), range, and connectivity.



## **High-Capacity Transit**

A system of public transportation services within an urbanized region operating principally on exclusive rights-of-way; examples include light rail transit or express buses on exclusive bus ways and their supporting services. *Source: Lynnwood Link Extension DEIS* 

## High Occupancy Vehicle (HOV)

A vehicle containing two or more occupants including carpools, vanpools, and transit vehicles.

#### **Historic Preservation**

Historic Preservation is defined in the National Historic Preservation Act of 1966 as identification, evaluation, recordation, documentation, curation, acquisition, protection, management, rehabilitation, restoration, stabilization, maintenance, research, interpretation, conservation, and education and training regarding the foregoing activities or any combination of the foregoing activities. "Lands, sites, and structures, that have historical, archaeological, or traditional cultural significance" are the tangible and material evidence of the human past, aged fifty years or older, and include archaeological sites, historic buildings and structures, districts, landscapes, and objects.

#### **Home Occupation**

Any activity carried out for gain by a resident and conducted as a customary, incidental, and accessory use in the resident's dwelling unit.

#### Household

See "dwelling unit."

## Hydrology

Hydrology refers to the properties, distribution, discharge, re-charge, and movement of surface and subsurface water.

## **Impact Fees**

Impact fees are charges assessed by local governments to new development projects that provide the opportunity to recover the costs of providing the public facilities required to serve the new development. Impact fees are only used to fund facilities, such as roads, schools, and

parks, that are directly associated with the new development. They may be used to pay the proportionate share of the cost of public facilities that benefit the new development; however, impact fees cannot be used to correct existing deficiencies in public facilities. In Washington, impact fees are authorized for those jurisdictions planning under the Growth Management Act (RCW 82.02.050 - .110), as part of "voluntary agreements" under RCW 82.02.020, and as mitigation for impacts under the State Environmental Policy Act (SEPA - Ch. 43.21C RCW). GMA impact fees are only authorized for: public streets and roads; publicly owned parks, open space, and recreation facilities; school facilities; and fire protection facilities in jurisdictions that are not part of a fire district.

## Impervious/Impermeable Surfaces

Impervious or impermeable surfaces are not easily penetrated by water. For instance, paved surfaces are impervious because they are not easily penetrated by rain.

## **Incentives (Economic Development)**

Components of economic development policy that seek to encourage growth in traditionally impoverished or underdeveloped areas. Incentives come in the various policy forms, but traditionally focus on tax incentives and infrastructure improvements. Development Incentives come from various levels of government on the local, state and national level. *Source: Wikipedia* 

## Infill

Development or redevelopment on properties or groups of properties within or surrounded by existing built-up areas.

## Jobs-to-Housing Ratio and Jobs-to-Housing Balance

The jobs-to-housing ratio refers to the ratio of jobs per household across a jurisdiction (city, county, or region). A jobs-to-housing balance is a target set that brings jobs and housing into balance within a specific geographic area. Jobs and housing are "balanced" at approximately 1.5 jobs per household. Jobs-to-housing ratio or balance is "a means to address travel demand by improving accessibility to jobs, as well as to goods, services, and amenities" (PSRC, Vision 2040). Shoreline does not currently meet this target in that there are .72 jobs per household

January 2015



(based on the 2010 census). The creation of new jobs through economic development in Shoreline can help alleviate the mismatch between jobs and housing, reducing commute times and creating more opportunities for residents to work and shop within their own community.

#### Land Use Map

The official land use map for a comprehensive plan that designates the general location and extent of the uses of land for housing, commerce, industry, open space, public facilities, and other land uses, as required by the Washington State Growth Management Act.

#### Land Use Pattern/Land Development Pattern

The use, types, and intensity of development; land use/development patterns have a direct relationship to transportation and trip demand, as well as average trip length; therefore, land use patterns also have a direct affect on energy consumption. *Source: Adapted from Lynnwood Link Extension DEIS* 

#### Lead Agency

Under SEPA, the lead agency is responsible for completing the environmental review of a proposal and issuing the necessary SEPA documents, so that all permitting agencies can make informed decisions. *Source: SEPA Glossary of Terms, Washington State Department of Ecology* 

#### Leadership in Energy and Environmental Design (LEED)

Leadership in Energy and Environmental Design (LEED) consists of a suite of rating systems developed by the United States Green Building Council (USGBC) for the design, construction and operation of high-performance green buildings, homes and neighborhoods.

#### Level of Service

Level of Service (LOS) is a term that describes the amount, type, or quality of facilities that are needed in order to serve the community at a desired and measurable standard. Under the Washington State Growth Management Act, LOS means an established minimum capacity of public facilities or services that must be provided per unit of demand or other appropriate measure of need. Level of service standards are synonymous with locally established minimum standards.

An example would be assigning a certain number of police officers per capita. (For example, in Shoreline, the policy on level of service for police is 0.85 officers per 1,000 residents and a response time of 5 minutes or less to all high priority calls and within 30 minutes to all calls, according to the City of Shoreline Comprehensive Plan, 2012.) LOS standards vary based not only on the type of service being provided but also by the quality of service desired by the community. A community can decide to lower, raise, or maintain the existing levels of service for each type of capital facility and public service provided. This decision will affect both the quality of the service provided, as well as the amount of new investment or facilities that will be needed to serve the community.

#### Level of Service for Transportation

Transportation level of service (LOS) describes the operational condition of the travel stream and acceptable adequacy requirements. Such standards may be expressed in terms such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, convenience, geographic accessibility, and safety. Transportation LOS is often a qualitative measure, graded A (best) through F (worst), describing the operational conditions of the city's transportation system.

## Light Rail Transit

A mode of mass transportation comprising light rail vehicles, which travel on steel tracks and are powered by electricity from overhead wires. This mode is characterized by its ability to operate in at-grade and/or grade-separated environments. *Source: Lynnwood Link Extension DEIS* 

## Link

The name of Sound Transit's light rail system; may also refer to a segment of a transportation system or roadway.

#### Living-Wage Jobs

A living wage is a level of income that allows the earner to afford adequate shelter, food, and other necessities for a satisfactory standard of living. Often minimum wages are insufficient to provide for this standard, given local cost of living. Living-wage jobs are capable of supporting a family. For the purposes of the planning in Shoreline, the term means jobs that pay at least 80 percent of the annual average wage of King County in a given year.

#### **Local Improvement District**

Local improvement districts (LIDs) can provide a means of assisting benefitting properties in financing needed capital improvements through the formation of special assessment districts. LIDs permit improvements to be financed and paid for over a period of time through assessments on the benefitting properties. (*MRSC Website*)

#### Low Impact Development

Low Impact Development (LID) describes a design approach to managing stormwater runoff and land development strategy applied at the parcel and subdivision scale. LID emphasizes conservation and use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely mimic predevelopment hydrologic functions. The approach attempts to closely replicate pre-development hydrology of watersheds through infiltrating, filtering, storing, evaporating, and detaining runoff close to its source. Low impact development may also be called green stormwater infrastructure and low impact side development. Techniques and treatments used include:

- Permeable pavement that allows stormwater to filter through the medium around each paver and down to a system of modular blocks.
- Bio-retention boxes and stormwater planters are landscaped concrete containers that allow stormwater to flow through special filter media, which captures and immobilizes pollutants.
- Green roofs and green walls designed to incorporate living elements, such as climbing plants, into roof structures and

retaining walls, not only improve the appearance of the structures, but also soak up runoff.

 Rain gardens are bio-retention areas that are graded and landscaped more informally, mimicking natural processes, and are typically larger than bio-retention boxes and stormwater planters.

#### Low Income Household

A low income household is at or below the US Department of Health and Human Services poverty guidelines.

#### **Market Forces**

Economic factors affecting the price, demand, and availability of a commodity; in relation to subarea planning, market factors will influence the demand for certain types of land uses the plan may propose. *Source: Adapted from Web Dictionary* 

#### Master Development Plan

A plan that establishes site specific development standards for an area designated Campus or Essential Public Facility as defined in the comprehensive plan. Master Development Plans incorporate proposed development, redevelopment, and/or minor expansion of uses as authorized in the Development Code.

## Median Household Income

The midpoint between all households with an income above the median and all households with an income below the median.

## **Mitigation/Mitigation Measures**

Mitigation can involve avoiding, minimizing, rectifying (repairing), reducing, eliminating, compensating, or monitoring of environmental impacts. Mitigation measures are the elements proposed to mitigate impacts. *Source: Adapted from the Glossary of SEPA Terminology, Washington DOE* 



#### Mixed Use

A development with combined commercial and residential uses, either in the same building or adjacent buildings.

#### **Mixed Use Residential (MUR)**

A proposed new zoning designation under consideration that would apply to the action alternatives of the DEIS. Typical transit-oriented development, mixed use building types would be allowed within MURzoned areas. These buildings would typically include active ground floor uses below residential and/or office uses above. MUR-85', MUR-65', MUR-45', and MUR-35' designations are identified for the alternatives studied in this DEIS. Refer to Section 3.1 of the DEIS for descriptions of these zoning classifications and more information. *Source: Otak, Inc.* 

#### Modes of Travel/Multimodal Transportation

Modes of travel include various types of transportation including singleoccupant vehicles, transit, carpooling, bicycling, walking, and other modes. Multimodal transportation involves multiple modes within a link, system, or network.

#### **Mode Split**

The percentage of total trips by various modes of travel. For example, a mode split objective might call for a minimum of 40 percent of all trips to be made by transit.

#### **Municipal Research and Services Center of Washington**

The Municipal Research and Services Center (MSRC) of Washington is a private, non-profit organization based in Seattle, Washington. MSRC's mission is supporting effective local government in Washington through trusted consultation, research, training, and collaboration. Its vision statement is excellence in local government fostering great communities. MRSC serves Washington local governments by providing: (1) dependable advice from a multidisciplinary team of professional consultants; (2) a comprehensive website; (3) access to thousands of sample documents; (4) timely print and electronic newsletters; (5) informative publications; and (6) access to the largest local government library collection in the Northwest

## Multifamily

A building containing two or more complete dwelling units, including units that are located one over the other. Multifamily buildings include duplexes, townhomes, garden apartments, and mid- and high-rise apartments. Accessory Dwelling Units are not considered multifamily housing.

#### **Multimodal Transportation Planning**

Multimodal transportation planning refers to decision- making that considers various modes (walking, cycling, automobile, public transit, etc.), and connections among modes so each can fill its optimal role in the overall transport system.

#### **Neighborhood Business Centers**

Shopping areas offering convenience goods and services to local residents. They primarily contain retail stores and offices.

#### Node

In the context of planning and economic development, **nodes** are often characterized as discrete areas that have compact, mixed use development; access to transit and major arterials; and high quality urban design.

#### **Non-Point Pollution**

Pollution which enters any waters of the State from any dispersed landbased or waterbased activities, including but not limited to atmosphere disposition; surface water runoff from agricultural lands, urban areas, or forest lands;, subsurface or underground sources, or discharges from boats or marine vessels.

#### **Non-Motorized Transportation**

Pedestrian, bicycle, and equestrian travel, and the facilities needed to make it safe and convenient.

## **Open Space**

Public open space includes parks and natural areas. Private open space includes natural areas or designated open space tracts, golf courses, and cemeteries. The Growth Management Act requires cities and counties to



identify open space corridors within and between urban growth areas, which include lands useful for recreation, wildlife habitat, trails, and connections between environmentally sensitive areas.

#### Parcel/Property Aggregation

Several parcels of land grouped together or considered as a whole. In relation to subarea planning, it may be recommended that parcel aggregation occur in order to create larger sites for redevelopment opportunities. *Source: Adapted from Web Dictionary* 

#### Placemaking

Placemaking is a multi-faceted approach to the planning, design, and management of public spaces. Placemaking capitalizes on a local community's assets, inspiration, and potential, ultimately creating good public spaces that promote people's health, happiness, and well-being. Placemaking is both a process and a philosophy.

#### **Planned Action**

A development project for which impacts have been addressed by an Environmental Impact Statement (EIS) associated with a plan for a specific geographic area before individual projects are proposed. A planned action involves detailed SEPA review and preparation of EIS documents in conjunction with sub-area plans. (*MRSC, Municipal Research Services Center of Washington website*)

#### **Planned Action Ordinance**

The regulatory instrument for implementing the Planned Action, adopted by the City that identifies the Planned Action area and related growth thresholds, as well as mitigation measures as analyzed in the EIS.

## Planned Unit Development (PUD)

A development type that allows more flexibility than found in a standard development. A PUD may contain features such as variety in the type, design, and arrangement or structures; a mix of land uses; conservation of natural land features; and efficient use of open space.

#### **Preferred Alternative**

An alternative that has been identified as preferred by the Lead Agency in an EIS. The preferred alternative of proposed zoning changes for the 145th Street Station Subarea Plan will be identified in the final environmental impact statement (FEIS). As the Lead Agency, the City of Shoreline will determine the Preferred Alternative based on outcomes from the draft environmental impact statement (DEIS), including public comment and technical analysis. Refer to Chapters 1 and 2 for an explanation of the planning and environmental process.

#### **Priority Needs Process**

Because community needs (e.g., transportation) exceed funding resources, a priority needs process is created. The process rates each improvement project and assigns it a score. High score projects are funded first.

#### **Public-Private Partnership**

A relationship between public and private agencies/entities whereby the parties involved work together on a project--such a project could be to construct a project (e.g., a capital facility) or to jointly administer a development. A wide range of other types of projects can be entered into by the partnership.

#### **Public Services**

Services provided for the public, which can be provided by a variety of public, non-profit, and private entities. For the purposes of analysis of potential impacts in the DEIS and FEIS the primary focus is on public services provided by public entities, such as school districts, municipal or district parks and recreation, police, and other agencies. "Public service obligations" means obligations imposed by law on utilities to furnish facilities and supply service to all who may apply for and be reasonably entitled to service.

#### **Public Spaces**

Those public and private lands designed for public use and gatherings, such as parks, plazas, walkways, and sidewalks



## Puget Sound Regional Council (PSRC)

The designated metropolitan planning organization for Shoreline, and responsible for regional growth management and transportation planning in the four-county region which includes King, Pierce, Snohomish, and Kitsap Counties. PSRC's General Assembly includes mayors, county executives, and council and commission members from the four counties. The Council also includes as members the ports of Everett, Seattle, and Tacoma; the State Department of Transportation; and the Transportation Commission. The PSRC prepares Multi-county Planning Policies for the four-county region.

#### **Rain Garden**

Planted depressions that allow rainwater runoff from impervious areas, like roofs, driveways, walkways, parking lots, and compacted lawn areas the opportunity to be absorbed. This reduces rain runoff by allowing stormwater to soak into the ground (as opposed to flowing into storm drains and surface waters which causes erosion, water pollution, flooding, and diminished groundwater). They can be designed for specific soils and climates. The purpose of a rain garden is to improve water quality in nearby bodies of water. Rain gardens can cut down on the amount of pollution reaching creeks and streams by up to 30 percent. *Source: Wikipedia* 

## **Regional Detention Facility**

A stormwater quantity control structure designed to correct the existing excess surface water runoff problems of a basin or sub-basin.

## Neighborhood Traffic Safety Program

A program created by the City of Shoreline to help address safety concerns on residential streets stemming from higher-speed cutthrough traffic. The program includes enhanced enforcement and education along with engineering solutions such as traffic calming (speed humps, traffic circles, narrowed lanes, etc.).

## **Retail Sales Leakage**

While Shoreline is home to many retail establishments, residents often leave the city to shop. Retail "sales leakage" refers to a deficit in sales made in the city compared with the amount of spending on retail goods by Shoreline residents. Refer to Section 3.2 of the DEIS for more information.

## Retention/Detention Facility (R/D)

A type of drainage facility designed either to hold water for a considerable length of time and then release it by evaporation, plant transpiration, and/or infiltration into the ground; or to hold surface and stormwater runoff for a short period of time, and then release it to the surface and stormwater management system.

#### Rezone

A change to the zoning classification of a current parcel or area, accomplished according to City regulations and through a public review process.

## Runoff

Waste water originating from rainfall and other precipitation and is found in drainage facilities, rivers, streams, springs, seeps, ponds, lakes, and wetlands, as well as shallow groundwater.

#### **Sanitary Sewer Systems**

A variety of systems with facilities that are used in the collection, transmission, storage, treatment, or discharge of any waterborne waste, whether domestic in origin or a combination of domestic, commercial, or industrial waste. These also can include approved on-site disposal facilities, but these are only considered sanitary sewer systems if they are designed to serve urban densities.

## Scoping

Scoping is the initial step in the Environmental Impact Statement (EIS) process. The purpose of scoping is to narrow the focus of the EIS to significant environmental issues, to eliminate insignificant impacts from detailed study, and to identify alternatives to be analyzed in the EIS. Scoping also provides notice to the public, interested agencies, tribes, and others that an EIS is being prepared, and initiates their involvement in the process. Source: *SEPA handbook, Washington Department of Ecology* 



## **Scoping Notice**

During the process of Scoping, the Lead Agency issues a Scoping Notice, which is published for public notification and states the Lead Agency's determination of significance and intent to complete an EIS.

#### Sharrow

A sharrow is a shared lane markings used to indicate a shared lane environment for bicycles and automobiles. Shared lane markings reinforce the legitimacy of bicycle traffic on the street and recommend proper bicycle positioning. A shared lane marking is not a facility type; it is a pavement marking. Sharrows:

- Assist bicyclists with lateral positioning in a shared lane with on-street parallel parking in order to reduce the chance of a bicyclist's impacting the open door of a parked vehicle,
- Assist bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side by side within the same traffic lane,
- Alert road users of the lateral location bicyclists are likely to occupy within the traveled way,
- Encourage safe passing of bicyclists by motorists, and
- Reduce the incidence of wrong-way bicycling.

*Source: National Association of City Transportation Officials (NACT) and Manual on Uniform Traffic Control Devices (MUTCD)* 

## Shoreline Municipal Code

The Shoreline Municipal Code (SMC) contains all laws adopted by the City of Shoreline. This document includes or incorporates by reference all regulations, rules, and procedures pertaining to the entire range of City responsibilities and initiatives. Chapters of the SMC relating to planning include: Land Use and Development, Subdivisions, Building and Construction, Environment, Vehicles and Traffic, Streets, Sidewalks, and Public Places.

## Significant Unavoidable Adverse Impact

A reasonable likelihood of more than a moderate adverse impact on the environment. As used in the State Environmental Policy Act (SEPA), "significance" involves context and intensity and does not lend itself to a formula or quantifiable text. The context may vary with the physical setting. Intensity depends on the magnitude and duration of an impact. The severity of an impact should be weighed along with the likelihood of its occurrence. An impact may be significant if its chance of occurrence is not great, but the resulting environmental impact would be severe if it occurred.

## Single Family Attached Housing

One dwelling unit that is attached to at least one other dwelling unit by common or abutting walls, with each dwelling unit located on a separate (fee simple) lot or on a common parcel. Examples could include duplexes, triplexes, or townhomes.

## Single Family Detached Housing

A building containing one dwelling unit that is not attached to any other dwelling by any means and is typically located on a separate (fee simple) lot surrounded by a private yard. Includes manufactured homes.

## Slope

The inclination of the land surface from the horizontal plane percentage of slope is the vertical distance divided by the horizontal distance, multiplied by 100. Slope is also measured in degrees (90 degrees being vertical) or as a ratio. A 100 percent slope would be 45 degrees or a 1:1 ratio.

## Solid Waste Management/Solid Waste Handling Facility

Management includes transfer, recycling, disposal, preparation for reuse, composting, and other means of treating solid waste materials disposed by the community; solid waste handling facilities are for the transfer or ultimate disposal of solid waste, including landfills and municipal incinerators.

## Sound Transit (ST)

State legislation of 1992 allowed the creation of Regional Transit Authority (RTA), as an agency in King, Snohomish, and Pierce Counties. The RTA was formed in 1993 and renamed to Sound Transit in 1999. Its Board is made up of local elected officials from the 3e counties and the State Department of Transportation Secretary. ST has the responsibility



to collect and distribute new tax revenues for regional rail transit, and to build and operate a regional rail transit system. ST also distributes funds to local transit agencies to provide feeder services for the rail system. Its funding depends on local voter approval of a regional high-capacity transit plan and funding.

## State Environmental Policy Act (SEPA)/SEPA Rules

An act of legislation adopted by the State of Washington and defined in the Revised Code of Washington (RCW) <u>Chapter 43.21C RCW</u>. SEPA Rules are described in <u>Chapter 197-11 of the Washington Administrative</u> <u>Code (WAC)</u>, and these rules have been rules adopted by the Department of Ecology to implement the Act. Following SEPA procedures provides a way to identify possible environmental impacts that may result from governmental decisions. These decisions may be related to issuing permits for private projects, constructing public facilities, or adopting regulations, policies, or plans. Information provided during the SEPA review process helps agency decision-makers, applicants, and the public understand how a proposal will affect the environment. This information can be used to change a proposal to reduce likely impacts, or to condition or deny a proposal when adverse environmental impacts are identified. *Source: SEPA website*, *Washington State Department of Ecology* 

#### Storm Drain/Drainage System

The system of gutters, pipes, streams, or ditches used to carry surface and stormwater from surrounding lands to streams, lakes, or Puget Sound.

#### **Storm Drains**

The enclosed conduits that transport surface and stormwater runoff toward points of discharge (sometimes called storm sewers).

#### Stormwater/Surface Water

Water that is generated by rainfall, and is often routed into drain systems in order to prevent flooding. Also, water originating from rainfall and other precipitation that is found in drainage facilities, rivers, streams, springs, seeps, ponds, lakes, and wetlands, as well as shallow ground water.



Drainage facilities and any other natural features which collect, store, control, treat, and/or convey surface and stormwater.

#### **Street Functional Classification**

A hierarchy of streets based upon the degree to which they provide through movement and land access functions. Categories include principal arterial, minor arterial, collector arterial, and primary and secondary local streets. Certain land use policies and street standards are based on these functional classifications.

#### **Strip Commercial**

An area occupied by small and medium sized commercial businesses that are generally organized in a linear fashion along an arterial street.

#### **Study Areas**

Defined geographic areas that are the focus of analysis and planning, also sometimes called specific area or subarea planning. In Shoreline, two types of study areas are recognized for light rail station subarea planning:

- Land Use Study Areas encompass parcels that may be appropriate for different uses and zoning than previously allowed, based on their proximity to future light rail stations. Land within the study area will be analyzed with regard to appropriate uses, bulk, densities, design and transition standards, and how zoning changes and neighborhood transition may be predictably phased over time.
- Mobility Study Areas represent properties and roadways that may be impacted by additional traffic generated by future light rail stations. Land within the study area will be analyzed with regard to enhanced pedestrian and bicycle connectivity to stations. Certain roadways extending beyond the study area boundaries will be analyzed with regard to traffic improvements or calming, and infrastructure for modes of travel that provide an alternative to single-occupancy vehicles.



#### Subarea

A subarea is a defined geographic area that is the focus of analysis and planning with the specific outcome of a subarea plan. The subarea encompasses both the land use and mobility study areas, and typically may have boundaries that match the broadest overlapping boundaries of these study area.

#### Subarea Planning

Subarea plans provide detailed land use plans for local geographic areas. This level of planning brings the policy direction of the comprehensive plan to a smaller geographic area. These plans are meant to implement the comprehensive plan, and be consistent with City policies, development regulations, and Land Use Map. *Source: Shoreline Comprehensive Plan* 

#### Subdivision

Land that has been divided into legal lots, or the process of dividing land into lots.

#### Sufficient Land Capacity for Development

The comprehensive plan and development regulations provide for the capacity necessary to accommodate all the growth in population and employment that is allocated to that jurisdiction through the process outlined in the county-wide planning policies, including zoning actions.

#### Sustainable Development/Triple-Bottom-Line Sustainability

Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Sustainability can be evaluated through a "triple-bottom-line approach that incorporates an expanded spectrum of values and criteria for measuring organizational (and societal) success related to social equity (people), the environment (planet), and economic factors (prosperity). There are many definitions of sustainability and sustainable development. All of them emphasize:

- Living within the limits
- Understanding the interconnections among society, environment, and economy
- Equitable distribution of resources and opportunities

*Source: Adapted from the Shoreline Comprehensive Plan, 2012 and sustainablemeasures.com* 

#### Swale

A shallow natural or constructed drainage feature. Swales are vegetated low-lying areas that can help filter pollutants as they collect, percolate, and/or slow direct stormwater. A swale and berm (raised earthen area) combination can be an attractive and functional landscape feature that helps detain and percolate runoff that would otherwise rush into streets, storm drains, and waterways.

#### **Third Places**

Third places are the places in between home and work that people frequent. The term is in the concept of community building, where the "first place" is the home and those that one lives with. The "second place" is the workplace—where people may actually spend most of their time. "Third places" are anchors of community life, and facilitate and foster broader, more creative interaction. All societies already have informal meeting places; what is new in modern times is the intentionality of seeking them out as vital to current societal needs.

#### Townhouse

A one-family dwelling in a row or configuration of at least 3 such units, in which each unit has its own front and rear access to the outside, no unit is located over another unit, and each unit is separated from any other unit by one or more vertical common fire-resistant walls. Townhomes may be located on a separate (fee simple) lot or several units may be located on a common parcel. Townhomes may be considered single-family attached dwellings or multifamily dwellings.

## Transfer of Development Rights (TDR)

Permits an owner of real property to sell or exchange the development rights associated with that property to another owner in return for compensation. A program in which the unused portion of a "sending" property's zoned capacity, expressed as dwelling units per acre or floor area, is transferred to the developer of a "receiving" site who is allowed to add the additional capacity to the zoned limit of that site. TDR's can be used to prevent the demolition of affordable housing units or to



protect sensitive resources, open space, or historical properties. By designating appropriate receiving areas and criteria for sending sites, local governments can meet identified community goals with market mechanisms.

## **Transit-Oriented Communities**

Transit-Oriented Communities (TOCs) are mixed-use residential or commercial areas within a walkable, compact neighborhood or subarea surrounding a transit access point. TOCs are designed to maximize access to public transport, and often incorporate features to encourage transit ridership. A TOC typically has a center with a transit station, surrounded by relatively high density development, with progressively lower-density development spreading outward from the center. TOCs generally are located within ½ mile from a transit stop, as this is considered to be an appropriate scale for pedestrians.

#### **Transit-Oriented Development**

Transit-oriented development (TOD) may occur on a site or within a district that is part of a transit-oriented community or neighborhood. TOD is commonly defined as high-density, mixed-use development within walking distance (typically within ¼ to ½ mile) of a transit station. TOD provides a range of benefits including increased transit ridership, reduced regional congestion and pollution, and healthier, more walkable neighborhoods. TODs that provide a mix of both affordable and market-rate housing contribute to a vibrant, livable, walkable environment that encourages transit use and makes it possible to live a high quality of life without complete dependence on a car for mobility or survival. *Source: adapted from transitorienteddevelopment.org and mitod.org* 

#### Transportation Demand Management (TDM) or Demand Management

Strategies for the reduction of automobile trips, particularly trips taken in single-occupant vehicles—TDM encourages public transportation over automobile use. TDM can include policies, programs, and actions implemented to reduce automobile and single-occupant vehicle trips, and to change travel behavior to make more efficient use of existing facilities to meet travel demand. Examples of demand management strategies include:

- (b) Shift demand to other modes of transportation;
- (c) Increase the average number of occupants per vehicle;
- (d) Decrease the length of trips; and
- (e) Avoid the need for vehicle trips.

The use of high-occupancy vehicles (public transit, car-pooling, and vanpooling) and spreading travel to less congested time periods through alternative work hour programs, are two specific examples of TDM actions.

#### **Transportation Facilities and Services**

Physical assets of the transportation system that are used to provide mobility, including roads, transit, bridges, traffic signals, ramps, buses, bus garages, park and ride lots, and passenger shelters.

## Triplex

A building containing 3 complete dwelling units, each of which has direct access to the outside or to a common hall. Depending on configuration, triplexes may be considered single-family attached dwellings on separate (fee simple) lots, or multifamily dwellings on a common lot.

## **Truck Route**

A roadway, usually a highway or major arterial, which is identified by federal, state, or local governments as an appropriate route for heavy commercial vehicle transport.

## **Unemployment Rate**

The percentage of the civilian labor force that is unemployed and actively seeking employment, based on claims made to the State for Unemployment Insurance.

## **Universal Design**

Universal design is an approach to the design of all products and environments to be as usable as possible by as many people as possible regardless of age, ability, or situation.



## Urban Growth Area (UGA)

The Growth Management Act requires King County's Comprehensive Plan to designate an Urban Growth Area (UGA), where most future urban growth and development is to occur to limit urban sprawl, enhance open space, protect rural areas, and more efficiently use human services, transportation, and utilities. The comprehensive plan designates an UGA that includes areas and densities sufficient to permit the urban growth that is projected to occur in the county for the succeeding 20-year period.

#### **Utilities or Public Utilities**

Enterprises or facilities serving the public by means of an integrated system of collection, transmission, distribution, and processing facilities through more or less permanent physical connections between the plant of the serving entity and the premises of the customer. Included are systems for the delivery of natural gas, electricity, Telecommunications services, and water, and for the disposal of sewage.

## Vehicle Miles Traveled (VMT)

A vehicle mile represents one vehicle traveling for one mile. This number is derived by counting the number of cars and the number of miles each car travels over a fixed period of time. This measure is frequently used by transportation planners.

## Visioning

A process of citizen involvement to determine values and ideals for the future of a community and to transform those values and ideals into manageable and feasible community goals.

## Walk-Shed or Ped-Shed Analysis

A "walk-shed" or "ped-shed" analysis evaluates the amount of time it takes people to walk to and from a high-capacity transit station other origin/destination (such as a neighborhood center) within a planning area (such as a station area/subarea). For example, a walk-shed analysis might show routes that could be traveled within 5 and 10 minutes to/from a station within a defined geographic area or travel shed. A typical speed of travel would be assumed for travel ways, usually 3 miles per hour for walking in urban areas. The analysis also typically includes time periods of delay at intersections and crossings. *Source: Otak, Inc.* 

## Walkability/Walkable Area

Walkability is a measure of how friendly an area is to <u>walking</u>. Walkability has many health, environmental, and economic benefits. Factors influencing walkability include the presence or absence and quality of sidewalks or other pedestrian rights-of-way, traffic and road conditions, land use patterns, building accessibility, and safety, among others. Walkability is an important element of sustainable urban design. *Source: adapted from Wikipedia* 

## Water Reclamation/Water Re-Use

Using treated wastewater in place of drinking water for commercial irrigation and industrial processes.

## Watershed

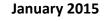
An aggregation of individual drainage basins, a watershed is an area that eventually drains to a larger water body, such as Lake Washington or Puget Sound. The six major watersheds in King County are Cedar River, Green River, Skykomish River, Snoqualmie River, White River, and Puget Sound. These watersheds contain a total of 72 individual drainage basins.

## Zoning

The delineation of specific types of land uses through zoning categories and the establishment of regulations governing the use, placement spacing, and size of land and buildings within those categories. Areas of zoning may be called zoning districts.

## Zoning Map

The map or maps that delineate a city's adopted zoning, including the boundaries of each zoning category and delineation of zoning districts.

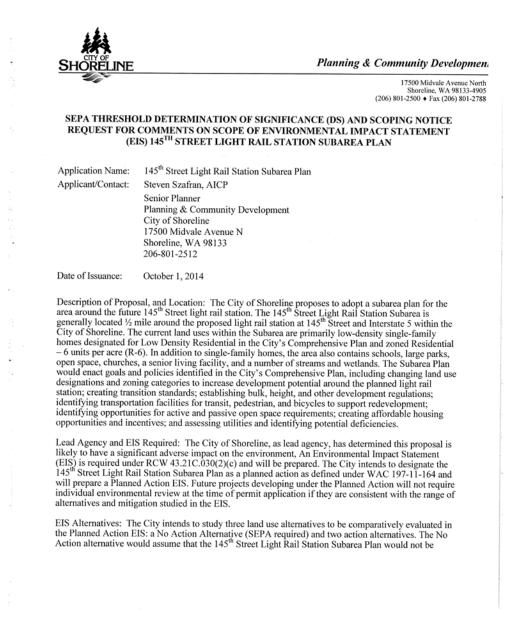




## **Scoping Notice**

The scoping notice for the 145th Street Station Subarea Planned Action Draft Environmental Impact Statement is provided on the following pages.









adopted and that existing Comprehensive Plan and zoning regulations would remain in place. Preliminarily, the two action alternatives would include variations of the proposal to designate the 145<sup>th</sup> Street Light Rail Station Subarea for a mix of higher density residential and supportive commercial uses. The first action alternative will evaluate growth along the corridors surrounding the future light rail station. This scenario is called "Connecting Corridors" and showcases both 5<sup>th</sup> Avenue NE and 155<sup>th</sup> Street as connecting corridors between station subareas; commercial districts at 165<sup>th</sup> Street, 15<sup>th</sup> Avenue, and Aurora Avenue N; and potential redevelopment areas at Fircrest and Aurora Square. Because potential development in this scenario is more spread out, lower density zoning is analyzed in several locations compared to the Compact Community scenario. The second action alternative will evaluate a "Compact Community" growth scenario. This scenario does not emphasize corridors and focuses potential growth solely on the area within roughly a ½ mile radius of the future light rail station. The two action alternatives will be developed based upon input from the public, city officials, agencies, consultants, and participants. The City has scheduled a Design Dialogue workshop to be held on October 9, 2014 at Shoreline City Hall Council Chambers for another opportunity for the public to comment on the EIS alternatives. The EIS alternatives are further explained below:

- Alternative 1 This is the No Action Alternative. The no action alternative will assume that
  zoning within the Subarea does not change and will evaluate how the Subarea will grow under
  the current zoning and land use designations. No action does not mean "no change" as densities
  within the Subarea is expected to increase with the operation of the light rail station. Alternative
  1 assumes that parcels in the Subarea will develop to their maximum development potential
  under the current zoning and that a number of accessory dwelling units will be developed
  providing increased density.
- Alternative 2 Connecting Corridors. This scenario showcases both 5th Avenue and 155th Street
  as connecting corridors between station subareas; commercial districts at 165th Street, 15th
  Avenue, and Aurora Avenue N; and potential redevelopment areas at Fircrest and Aurora
  Square. It is a combination of previous versions of maps that emphasized the 5th Avenue and
  155<sup>th</sup> Street corridors individually. Because potential development in this scenario is more spread
  out, lower density zoning is analyzed in several locations compared to the Compact Community
  scenario. Staff believes that even though this scenario illustrates potential growth as more spread
  out than what may be appropriate to adopt as final zoning, studying this alternative with regard
  to potential impacts and mitigations would provide for a variety of options for future
  consideration.
- Alternative 3 Compact Community. This scenario does not emphasize corridors and focuses potential growth solely on the area within roughly a ½ mile radius of the future light rail station. It is a hybrid of the "No Corridor Emphasis" zoning scenario presented at the September 15 City Council meeting. Because potential development in this scenario is concentrated, higher density zoning is analyzed in several locations compared to the Connecting Corridors scenario. This scenario illustrates potential growth as possibly more intensive than what may be appropriate to adopt as final zoning, but analyzing higher intensity in the Draft EIS allows for a variety of options for future discussion because Council may not consider potential designations beyond what was analyzed, but may consider something less intensive. Alternative 3 imagines a more compact, mid-rise, higher density land uses surrounding the future light rail station. Building heights of 85 feet are imagined near the station and along the freeway on both the west and east sides. Zoning for four-story buildings will generally act as a buffer between the 85 and 35 foot zoning designations that are anticipated throughout the Subarea.

The EIS Alternatives are located in map form on the City's website: http://www.cityofshoreline.com/government/departments/planning-community-development/planning-



projects/light-rail-station-area-planning/145th-street-station-subarea-planning. This page will also list upcoming meetings, events, documents, and revised maps when they become available.

Elements of the Environment to be Addressed: The lead agency has identified the following topic areas for analysis in the Planned Action EIS: Land Use, Housing, Transportation, Streams, Wetlands, Parks and Recreation, and Utilities. The public is asked to provide the City with comments on whether these are the correct and complete list of environmental elements to be analyzed in the DEIS. For more information on reviewing and commenting as part of the scoping process, refer to <u>http://www.ecv.wa.gov/programs/sea/sepa/citizenGuidance.html</u>.

EIS Scheduling and Public Process: City staff presented seven maps to the City Council on Septembe 15, 2014 for comment and consideration. The Council discussed the merits of each map and directed staff to consolidate, eliminate, and bring maps back to the Council for further consideration. September 29, 2014 – Council picks three alternatives to be studied at the Design Dialogue Workshop Part II.

October 1, 2014 – Determination of Significance is issued opening the comment and scoping period for the Draft Environmental Impact Statement.

October 9, 2014 – The Design Dialogue Workshop Part II will take place. The workshop will provide a opportunity for the public, staff, and the consultant to hear comments, provide input, and draft design ideas for the 145<sup>th</sup> Street Light Rail Station Subarea Plan. The comments received for the 145<sup>th</sup> Street Light Rail Station Subarea Plan and the scoping comments for the 145<sup>th</sup> Subarea Draft Environmental Impact Statement will inform topics that are analyzed in the DEIS.

October 31, 2014 - The public comment/scoping period ends.

November 10, 2014 - Council will confirm the three alternatives to be studied in the DEIS.

Scoping Comments: Agencies, affected tribes, and members of the public are invited to comment on th scope of the Planned Action EIS. You may comment on EIS Alternatives, issues that should be evaluated in the EIS, probable significant adverse impacts, mitigation measures, and licenses or other approvals that may be required. The method and deadline for providing scoping comments is:

Written Comments: Provide written comments on the scope of the Planned Action EIS no later than 5:00 p.m. on

October 31, 2014. Comments may be sent to the Lead Agency Contact Person, Steven Szafran, AICP, Senior Planner at the City of Shoreline Planning & Community Development Department, 17500 Midvale Avenue N, Shoreline, WA 98133 or via email at sszafran@shorelinewa.gov.

Scoping Meeting/Design Dialogue Workshop: Written comments on the Determination of Significanc and/or scope of the Planned Action EIS may also be submitted at the 145<sup>th</sup> Street Light Rail Station Subarea Plan Design Dialogue Workshop on Thursday, October 9, 2014, at Shoreline City Hall Counci Chambers from 6:30 – 9:00 p.m. Shoreline City Hall is located at 17500 Midvale Avenue N, Shoreline, WA 98133.

RESONSIBLE OFFICIAL: Rachael Markle, AICP, SEPA Official

Planning & Community Development Director City of Shoreline Department of Planning & Community Development



17500 Midvale Avenue N Shoreline, WA 98133 206-801-2531

SIGNATURE:

Khihad Markh Date:

Appeal: There is no administrative appeal of this determination. The SEPA Threshold Determination may be appealed with the decision on the underlying action to superior court. If there is not a statutory time limit in filing a judicial appeal, the appeal must be filed within 21 calendar days following the issuance of the underlying decision in accordance with State Law.



# Public and Stakeholder Involvement Information-Links

The City of Shoreline has completed extensive public and stakeholder outreach to support the development of the 145<sup>th</sup> Street Station Subarea Plan and environmental analysis for the planned action. These efforts are summarized in Chapter 1 of this DEIS.

A link to the Public and Stakeholder Involvement Plan for Station Subarea Planning is provided below. In addition, the links below provide access to summarizing documents on the results of specific public/community and stakeholder engagement efforts, as well as other information.

- Public and Stakeholder Involvement Plan: <u>http://www.shorelinewa.gov/home/showdocument?id=1</u> <u>4595</u>
- Visioning Workshop Comments: <u>http://www.shorelinewa.gov/government/departments/</u> <u>planning-community-development/planning-</u> <u>projects/light-rail-station-area-planning/visioning-</u> <u>workshop-comments</u>
- Frequently Asked Questions: <u>http://cosweb.ci.shoreline.wa.us/uploads/attachments/p</u> <u>ds/lightrail/Light\_Rail\_FAQs.pdf</u>
- Design Dialogue Workshops: <u>http://www.shorelinewa.gov/government/departments/</u> planning-community-development/planning- projects/light-rail-station-area-planning/145th-design-<u>dialogue-workshops</u>
- Walkshops—145<sup>th</sup> Station Subarea Walking Tours: <u>http://www.shorelinewa.gov/government/departments/</u> planning-community-development/planning- projects/light-rail-station-area-planning/145th-walking-and-biking-tour.



